

Report of the CGIAR Research Program on Livestock and Fish Commissioned External Evaluation of the Program's Value Chain Approach

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CGIAR is a global partnership that unites organizations engaged in research for a food secure future. The CGIAR Research Program on Livestock and Fish aims to increase the productivity of small-scale livestock and fish systems in sustainable ways, making meat, milk and fish more available and affordable across the developing world. The Program brings together four CGIAR Centers: the International Livestock Research Institute (ILRI) with a mandate on livestock; WorldFish with a mandate on aquaculture; the International Center for Tropical Agriculture (CIAT), which works on forages; and the International Center for Research in the Dry Areas (ICARDA), which works on small ruminants. <http://livestockfish.cgiar.org>

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The people who were most inconvenienced by the evaluation and also most central to its implementation were the four value chain coordinators in the sites visited, Barbara Rischkowsky in Ethiopia, Daniel Pezo in Uganda, Amos Omore in Tanzania, and Malcolm Dickson in Egypt. The evaluation approach put the burden of responsibility for arranging meetings, organizing field visits and transport through the site visit, and identifying key partners and stakeholders for the survey. All approached the task differently but all did excellent jobs.

At each site, the evaluation made heavy demands on the value chain teams and collaborators. The program staff participated actively and candidly in discussions and during the field site visits and wrap up workshops. The partners and stakeholders also gave up a lot of their time and participated actively and constructively. During each site visit, the evaluation team relied heavily on support staff in the program offices, particularly drivers who safely and efficiently navigated through “jammed” city streets.

A large number of the program staff joined in discussions in Nairobi and more than half the staff filled the staff survey. The discussions in Nairobi near the start of the evaluation were particularly useful for setting the stage and helping to clarify relationships between the program’s value chains work and work under the other program themes.

Following the field visits, the value chain coordinators at all sites were contacted for additional information – some several times. The information provided was extremely useful. It was unfortunate that the evaluators were not able to meet face-to-face with the value chains development theme leader, Iheanacho Okiki. Acho gave useful feedback on the observations of the evaluation team and provided essential information on the reformulated Value Chains Transformation and Scaling flagship.

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Finally, it is important to recognize the support of Shirley Tarawali, ILRI Assistant-Director General and Chair of the Evaluation Reference Group, and Jimmy Smith, ILRI Director General.

Acronyms

| | |
|---------|---|
| A4NH | CGIAR Research Program on Agriculture for Nutrition and Health |
| ASARECA | Association for strengthening Agricultural Research in Eastern and Central Africa |
| ASF | Animal source food |
| ACIAR | Australian Centre for International Agricultural Research |
| BMP | Best management practices |
| BoT | Board of Trustees (ILRI) |
| BRAC | (formerly Bangladesh Rural Advancement Committee) |
| CCEE | CRP-Commissioned Independent External Evaluation |
| CIAT | International Center for Tropical Agriculture |
| CGIAR | Consultative Group on International Agricultural Research |
| CRP | CGIAR Research Program |
| DDF | Dairy Development Forum |
| EAC | East African Community |
| EAFF | East Africa Farmer Federation |
| EA3DP | East Africa Agro-Enterprise and Agro-Industries Development Program |
| ECB | Evaluation Commissioning Body |
| EM | Evaluation Manager |
| ERG | Evaluation Reference Group |
| FAO | Food and Agriculture Organization of the United Nations |
| FEAST | Feed Assessment Tool |
| GIZ | German Society for International Cooperation |
| ICARDA | International Center for Agricultural Research in the Dry Areas |
| IDOs | Intermediate development outcomes |
| IEA | Independent Evaluation Arrangement |
| IEE | Independent External Evaluation |
| IFAD | International Fund for Agricultural Development |
| ILO | International Labor Organization |
| ILRI | International Livestock Research Institute |
| IMC | ILRI Institutional Management Committee |
| ITC | International Trade Center |
| L&F | CGIAR Research Program on Livestock and Fish |
| LIVES | Livestock Irrigation and Value Chains for Ethiopian Farmers |
| M4P | Markets Work for the Poor |
| MSMEs | Micro, small and medium scale enterprises |
| PPMC | Program Planning and Management Committee |
| PM | Program managers |
| R4D | Research for Development |
| SASI | Systems Analysis for Sustainable Innovations |
| SDC | Swiss Development Corporation |
| SMEs | Small and medium scale enterprises |
| SIP | Strategy and Implementation Plan |
| SLOs | CGIAR system level outcomes |
| SLU | Swedish University of Agricultural Science |
| SNV | Netherlands Development Organization |
| SPAC | Science and Partnership Advisory Committee |
| SWOT | Strengths, weaknesses, opportunities, threats |
| TSI | Targeting Sustainable Interventions |
| UNIDO | United National Industrial Development Organization |
| USAID | United States Agency for International Development |

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| VCC | Value Chain Coordinator |
| VCD | Value chain development |
| VCTS | Value Chain Transformation and Scaling |
| VEDCO | Volunteer Efforts for Development Concerns |
| WCRD | World café for recommendations development |
| WEF | World Economic Forum |
| WUW | Wrap-up Workshop |

Executive Summary

CGIAR Research Program on Livestock and Fish, “More Meat, Milk and Fish – by and for the Poor”, is being implemented by ILRI, ICARDA, WorldFish and CIAT. The goal of the program is to improve the performance of small-scale livestock and fish value chains in order to make meat, milk and fish more available and affordable to poor consumers.

The value chains research for development (R4D) work of the program is focused on animal-source food value chains in nine countries: smallholder dairy in Tanzania and India; pork in Uganda and Vietnam; small ruminants in Ethiopia and Burkina Faso; aquaculture in Egypt and Bangladesh; and dual purpose dairy-meat in Nicaragua. In each country, R4D sites have been established to “serve as laboratories” for characterizing and assessing smallholder value chains, introducing and generating evidence on technological and institutional innovations, mobilizing resources needed to transform the selected value chains, and identifying strategies and mechanisms for scaling up.

The objective of the evaluation was to provide information and recommendations to support strategic decision making on the program’s value chain approach by the program managers and by the value chain coordinators at the R4D sites. The evaluation was designed to address issues that had been identified as areas of concern by the Program Planning and Management Committee (PPMC) and the Science and Partnerships Advisory Committee (SPAC). The evaluation covers the value chains work carried out at the program’s R4D sites from the start of the program in 2012 through September 2014.

The evaluation focused on four main areas of investigations and twelve evaluation questions:

Program design

- 1) How appropriate are the conceptual framework and theory of change?
- 2) How appropriate were country and sector selection?

Program management

- 3) How effective and efficient has been VCD coordination and oversight?
- 4) Have financial and human resources been sufficient?

R4D implementation

- 5) How appropriate have been the VC research agendas?
- 6) How strong are synergies between VCD and other thematic research?
- 7) To what extent has there been sufficient and effective multi-disciplinarity?
- 8) How appropriate and effective has been partnership and stakeholder engagement?

Outputs to outcomes

- 9) What progress has been made in technological and institutional innovation?
- 10) What progress has been made in value chain upgrading?
- 11) What are prospects for scaling?
- 12) What are prospects for achieving progress on the IDOs?¹

The evaluation was based on three main sources of information and data: field visits to ILRI headquarters and the R4D sites in Ethiopia, Uganda, Tanzania and Egypt; review of program documents and presentations; and three surveys targeted to program staff at all sites, partners and stakeholders at the visited sites, and value chain experts and members of the SPAC.

The key findings of the evaluation and corresponding recommendations and working suggestions are summarized below.

¹ Identified in Section 3.2

| Key Findings | Recommendations and Working Suggestions |
|---|--|
| 1) How appropriate are the conceptual framework and theory of change? | |
| <ul style="list-style-type: none"> ➤ The conceptualized role of the of value chains work in the context of a broader A4RD program is relevant and appropriate. ➤ The program and VCTS theories of change identify some criteria for assessing research priorities and progress in developing value chains but, for the most part, they are more relevant for higher level strategic planning than they are for research priority setting. ➤ The transmission mechanisms and priorities for the VCTS theory of change are not sufficiently clear and the assumptions require greater specification and critical appraisal. ➤ The R4D impact pathways, as thus far developed, are not sufficient for assessing and communicating about intervention logic and program priorities. | <ol style="list-style-type: none"> 1. Review and further develop impact pathways, particularly assumptions about employment, consumption and environment outcomes. [PM, VCC]² § It would be more useful for planning, priority setting and monitoring to develop impact pathways or at least upgrading strategies for specific “generic” value chains. [VCC]³ |
| 2) How appropriate were country and sector selection? | |
| <ul style="list-style-type: none"> ➤ The standard criteria for choosing countries were appropriate but application of the criteria was not convincing. ➤ Some countries do not appear to be optimal from the standpoint of value chain upgrading and scaling. ➤ The strict combination of sectors and countries is limiting the ability of the program to generate international public goods. | <ol style="list-style-type: none"> § Develop a strategy for transitioning within three to four years from one sector per country in nine countries to a more flexible approach that would include provision of support in other countries and work on multiple species in countries where have built up capacity. [PMs] |
| 3) How effective and efficient has been VCD coordination and oversight? | |
| <ul style="list-style-type: none"> ➤ Value chain coordination and had substantively and positively impacted on development and implementation of the program’s value chains approach. ➤ Planning and reporting processes contributed to stimulating creative thinking and helped increase awareness of the need to focus on broader program objectives and outcomes. ➤ There is now an identifiable toolkit that should be of interest to prospective donors and development partners. ➤ While there clearly have been benefits from methodology harmonization, there should be flexibility for building tools and best practice | <ol style="list-style-type: none"> 1. Establish in-house business development competency at the program management level to support mainstreaming of business perspective and reinforce capacity for research on value chain business models. [PM] 2. Identify and put more resources into mechanisms to support cross-site learning and information exchange. [PM] 3. Ensure there are systematic frameworks for comparative analysis, innovations assessment and lessons learning – within sites, across sites within countries and across countries. [PM, VCC] § Flexibility and agility in planning are issues that must be kept in mind at both the program and |

² PM – means that the recommendation or working suggestion is mainly for program managers; VCC means that the recommendation or working suggestion is mainly for the value chain coordinators.

³ Working suggestions are indicated by the symbol§

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| <p>guidelines from the bottom up and through cross-site lessons-learning.</p> <p>➤ There is a need to identify complementary mechanisms to support cross-site learning and information exchange.</p> | <p>R4D site levels. [PM, VCC]</p> <p>§ Ensure that the value chain teams build information exchange and learning linkages with other value chain programs in the same and nearby countries. [PM, VCC]</p> |
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4) Have financial and human resources been sufficient?

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| <p>➤ The teams are understaffed and underfunded.</p> <p>➤ The main human resources challenge was insufficiency of full time experienced staff.</p> <p>➤ Bilateral funding had a major impact on the pace and pattern of implementation in sites that had made the greatest progress.</p> <p>➤ Implementation approaches were significantly affected by the need to focus on project deliverables.</p> <p>➤ Bilateral funds need to be mobilized to close the gap between program needs and program core resources.</p> | <ol style="list-style-type: none"> 1. Reinforce capacity for resources mobilization at the program management level so the burden for resources mobilization does not fall so heavily on the value chains teams. [PM] 2. Establish a common pool of resources at program level for flexible response to unplanned needs, cross site visits, and regional and sub-regional technical meetings. [PM] <p>§ Establish a core teams of fulltime, experienced practitioners with appropriately diverse, complementary skills [PM, VCC]</p> <p>§ Clarify incentive and supervision systems for the staff working on value chains teams. [PM]</p> |
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5) How appropriate have been the VC research agendas?

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| <p>➤ The site selection approach has clear methodological strengths to offer other practitioners.</p> <p>➤ The quality and comprehensiveness of the situational analysis reports were very good but the reports are limited as priority setting tools.</p> <p>➤ The value chain assessments were comprehensive and directly engaged partners and value chain actors in the assessment process; the main limitations of the assessments were the length and complexity of the modules and disproportionate coverage to the problems faced by producers.</p> <p>➤ There were few, if any, new areas of animal science research as a result of the program's investment in characterization and diagnosis.</p> <p>➤ More research is needed on the economic context and development dynamics within which value chain actors are operating, and on how to develop sustainable business services for poor producers.</p> <p>➤ The teams were not using systematic comparative frameworks and adaptive research designs to generate valid information on the benefits of the innovations being assessed.</p> <p>➤ Integrated approaches could become a major strength of the program.</p> <p>➤ The teams need to do more to address technological opportunities and constraints all</p> | <ol style="list-style-type: none"> 1. Ensure that the value chain teams identify and assess innovations for three or more specific value chains in each country, ranging less formal local market chains to formal sector chains leading to urban areas. [VCC] 2. Ensure that the value chain teams address issues at multiple system levels ranging from local farming systems and market linkages to sector development, with correspondingly less focus on micro, community based piloting. [VCC] 3. Ensure that attention is given to at least three nodes of value chains, even for chains leading to local markets. [VCC] 4. Ensure that attention is being given to enterprise linkages and synergies in the design and assessment of animal science innovations. [VCC] 5. Put relatively more resources into research related to input dealers, traders, processors, transporters, and coordination and alignment among the value chain actors. [VCC] <p>§ More recently started sites should invest less up front in the initial appraisal of value chain innovation priorities. [VCC]</p> <p>§ Introduce and use sound priority setting criteria driven by evidence and business realities. [VCC]</p> <p>§ Give priority to developing and testing strategies for effective integration of multiple innovations. [PM, VCC]</p> <p>§ The feasibility, sustainability, efficiency and</p> |
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| <p>along value chains.</p> <ul style="list-style-type: none"> ➤ The teams have not taken full account of the extensive previous work and literature. ➤ The attention to gender is a strong point in the program's VC work which could be further strengthened. ➤ There is a need for research on business models linking producers to processors and business models for addressing the challenges faced by micro, small and medium enterprises. ➤ The teams should invest more in feasibility analyses on alternative technological and institutional innovations. | <p>quality trade-offs between business and public sector supplied services should be assessed. [VCC]</p> <ul style="list-style-type: none"> § Ensure that the value chain teams are investing in appraisal of the competitive advantage of the specific value chains for the target species. [PM, VCC] § Ensure that informal and participatory methods used for technology and institutional innovation assessments are complemented with systematic designs. [VCC] § Reinforce in-house competency for cross-site support on on-farm research methodology [PM, VCC] |
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6) How strong are synergies between VCD and other thematic research?

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| <ul style="list-style-type: none"> ➤ There was good cooperation and collaboration between the value chain teams and several of the flagship scientists. ➤ The value chains work has had little impact on the agendas of the technical flagships; value chain teams had minimally drawn on results of the program's technology flagships. ➤ There is a need to strengthen collaboration and communication between VC and Flagship science teams. | <ol style="list-style-type: none"> 1. Establish a mechanism for regular consultation and coordination at the level of the value chain coordinators and thematic flagship leaders. [PM] <ul style="list-style-type: none"> § Appoint focal points and organize joint planning, where this is not already being done. [PM, VCC] |
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7) To what extent has there been sufficient and effective multi-disciplinarity?

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| <ul style="list-style-type: none"> ➤ There appeared to be strong awareness of and commitment to the need for a multidisciplinary approach in animal science interventions. ➤ There were minimal or no inputs from economists for designing demonstrations and trials. ➤ There was not enough focus on the business side of things; and not enough in-house capacity in business economics and business development. ➤ Incentive and supervisory systems do not sufficiently reward multidisciplinary teamwork. ➤ There are gaps in core animal science competencies. ➤ Few of the scientists considered that the transactions costs thus far had been acceptable. ➤ The most urgent need for new complementary competency was stronger business development perspective and experience. | <ol style="list-style-type: none"> 1. Establish core planning and implementation teams for each site of four to five scientists with complementary competencies; minimum time allocations should be 50 percent or more. [PM] 2. Ensure that priority is given to developing and testing strategies for integration of multiple interventions, addressing both institutional and technological aspects of integrated approaches. [VCC] 3. Reinforce business development competency and perspective. [VCC] <ul style="list-style-type: none"> § Ensure that there are inputs from economists in the design and appraisal of demonstrations [VCC] |
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8) How appropriate and effective has been partnership and stakeholder engagement?

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| <ul style="list-style-type: none"> ➤ The program's commitment to and progress in establishing partnerships with frontline developmental organization is one of the strengths of the program approach. ➤ The emphasis on engagement and partnering had succeeded in establishing a sense of shared ownership and partnership. ➤ There were some tensions with developmental NGOs because the partner organizations wanted a stronger focus on development. ➤ The value chain teams need to accelerate action, focus more on research related to value chain upgrading, streamline financial and contractual procedures, and give core partners more fundamental roles in program decision making. ➤ There were glaring gaps in partnerships with international NGOs and UN agencies that have strong experience and knowledge for supporting value chains development. ➤ Other than involvement in meetings, workshops and periodic site visits, there had been little engagement with commercial value chain actors. ➤ In the sites visited, engagement was weak with relevant regional institutions and initiatives. ➤ There has been limited progress and insufficient investments in communications and advocacy. | <ol style="list-style-type: none"> 1. Develop agreements with two or more strategic knowledge partners to support innovation on value chain development approaches and quality-assure the performance of country-level development organization partners. [PM] 2. Develop strategies for engaging private sector⁴ actors and associations in identifying and assessing strategies for private sector services provision and business models linking producers to processors. [VCC] <p>§ Clarify strengths and limitations of the program as a knowledge partner to developmental actors. [PM]</p> <p>§ Accelerate or launch assessments of the organizational landscape at the national and sub-national levels, followed by clarification of partner roles, strengths and incentives. [VCC]</p> <p>§ Develop a differentiated partnering and engagement strategy – with a core group of full partners working within a broader set of collaborators and stakeholders. [VCC]</p> <p>§ Promote the program at the senior policy level and to take steps to reinforce the sense of national ownership at that level. [VCC]</p> <p>§ Accelerate plans to reinforce R4D level communication strategies and capacities. [VCC]</p> |
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9) What progress has been made in technological and institutional innovation?

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| <ul style="list-style-type: none"> ➤ Overall, there had been little progress on validating the potential of innovations. ➤ Progress was greatest in sites where research had been most advanced before the program started. ➤ Technological and institutional innovations receiving the greatest attention were pro-poor, although most of the innovations should be relevant to other smaller scale producers as well. ➤ There is a need to focus more on strategies and approaches for business development along the value chains. ➤ There is a need to learn more (from the literature) about the innovations being assessed. | <ol style="list-style-type: none"> 1. Accelerate action research on innovations right away for credibility with partners and prospective donors. [VCC] 2. Ensure that research on innovations is designed and implemented in a way that makes it possible to test a range of different strategies. [VCC] <p>§ Maintain an inventory of the innovations being worked on at all sites, including information on factors that influence success or not. [PM]</p> <p>§ Develop guidelines on the potential for and limitations of business development in groups; and alternative approaches for business organization and management. [PM]</p> <p>§ Develop guidelines for assessing the feasibility, sustainability, efficiency and</p> |
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⁴ Through the evaluation, the term “private sector” is used to refer to all people and enterprises involved in commercial and semi-commercial activities such as producers, inputs suppliers, transporters, traders, processors, wholesalers, retailers, exporters, etc. The term does not include public sector and non-profit organizations.

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| | <p>quality trade-offs between business and public sector supplied services. [PM]</p> <p>§ Develop guidelines for assessing the poverty implications of different technological and institutional innovations in a more systematic way. [PM]</p> <p>§ Ensure that the teams do not over-invest in location specific adaptation. [VCC]</p> |
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10) What progress has been made in value chain upgrading?

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| <ul style="list-style-type: none"> ➤ The main contribution to value chain upgrading had been training provided to value chain actors and program partners. ➤ There had been some upgrading as a result of spillovers from the assessment of innovations. ➤ The program had not yet mobilized significant funding for value chain upgrading and scaling. ➤ Additional priorities for upgrading support are: value chain coordination, policy engagement and advocacy, and upgrading of MSMEs. | <ol style="list-style-type: none"> 1. Increase program support for value chain coordination, policy engagement and upgrading of MSMEs. [PM, VCC] 2. Ensure that support for multi-stakeholder platforms is paired with research on effectiveness, transactions costs, core roles and potential services. [VCC] <p>§ Develop guidelines on conditions and timeframes for pump priming subsidies. [PM]</p> <p>§ Engage more with commercially-oriented SMEs (and even larger companies) for identifying and assessing VC upgrading strategies and mobilizing resources for value chain upgrading. [VCC]</p> |
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11) What are prospects for scaling?

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| <ul style="list-style-type: none"> ➤ There had been insufficient attention to the future scaling potential of innovations. ➤ Most innovations were not amenable to scaling other than through replication. ➤ Prospects are low that most innovations will go to scale as a result of market dynamics and private sector investment. ➤ The teams had not yet generated convincing evidence on any of the innovations being worked on. ➤ There was a lack of articulated strategies and mechanisms for scaling. ➤ There is a need to strengthen private sector collaboration in order to lessen future donor dependency. | <ol style="list-style-type: none"> 1. Develop realistic scaling strategies that identify mechanisms, essential requirements, assumptions and enabling actions. 2. Ensure that evidence is being generated to establish sound business cases for public and private sector investment in value chains for the target species and integrated animal science packages. [PM] <p>§ Clarify and take into account the strategies and priorities of national governments, regional organizations, donor agencies and foundations, and international financial institution. [PM, VCC]</p> |
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12) What are prospects for achieving progress on the IDOs?

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| <ul style="list-style-type: none"> ➤ The value chain teams were focusing most resources on assessing innovations to increase productivity, i.e. on IDO 1. ➤ The prospects look to be reasonable for getting policy makers and development actors to recognize and support the development of small- | <ol style="list-style-type: none"> 1. The teams need to give greater attention to identifying and assessing strategies for transforming the target value chains, working at all scales and at all nodes of the value chains. [VCC] <p>§ Ensure that greater attention is given to the</p> |
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| <p>scale production systems for the target commodities.</p> <ul style="list-style-type: none"> ➤ The prospects for making significant contributions to employment, income generation and improving nutritional status of poor consumers will likely be increased if there is a rebalancing to address productivity and efficiency along entire value chains. ➤ Transformative changes in the organization, structure and performance of value chains are needed to make more than very incremental progress on the intermediate development outcomes. | <p>environmental impacts of current value chains and the innovations being worked on to support value chains upgrading [VCC]</p> |
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Considering all the questions and indicators addressed in the evaluation, the performance of the value chains R4D in Livestock and Fish meets reasonable expectations. The main strengths of the value chains approach of Livestock and Fish include: a relatively sound conceptual framework and theory of change, effective and efficient value chain coordination and oversight, mostly appropriate research agendas, sufficient multi-disciplinarity, and appropriate and effective partnerships. Two key areas of concern are the insufficiency and uncertainty of human and financial resources, and relatively weak synergies between the value chains R4D and other thematic research.

While the program needs to take steps to improve performance, there does appear to be a strong value proposition for value chains R4D on pro-poor animal-food source value chains. The top priorities among the priorities for enhancing the performance and value proposition of the value chains R4D of Livestock and Fish include:

- More emphasis is given to piloting and validating of innovations compared to value chain characterization and assessment and methods refinement.
- Greater attention is given to assessing dynamic trends, expected future challenges and whether innovations are likely to be relevant and viable in the coming decade or so, and not only under current circumstances.
- Greater priority is given to strategies and innovations for transforming local farming and marketing systems, with correspondingly less priority being given to incremental change strategies.
- The program has found ways to work on value chain issues that are beyond current core competencies such as market linkages, business models for services delivery, product development and quality, enabling policies and regulations, and value chain coordination mechanisms.
- The value chain teams effectively mobilize expertise from other knowledge partners and leverage support from the discovery flagships.
- There is systematic use of comparative framework and quasi-experimental designs, leading to improved evidence on interventions and how contexts affect the likelihood of success.

1. Introduction

1.1. Origins of the Evaluation

The CGIAR Policy for Independent External Evaluation calls for CRP-Commissioned Independent External Evaluations (CCEEs). CCEEs normally cover part of the entire work of the CRP and are expected to support CRP management and governance decisions. CCEEs also serve as building blocks for comprehensive, external CRP evaluations managed by the IEA.

CGIAR Research Program 3.7 on Livestock and Fish, “More Meat, Milk and Fish – by and for the Poor”, was approved in 2011 and launched in early 2012. An independent evaluation by the IEA is scheduled for 2015. During its meeting in September 2013, the Program Planning and Management Committee (PPMC) of CRP 3.7 reviewed priorities for CCEEs to be carried out in the first cycle of independent evaluations and established as top priority an evaluation of the program’s value chain approach, primarily but not exclusively focused on the program’s Value Chain Development (VCD) theme⁵.

CRP managers subsequently clarified requirements for the CCEE with the IEA and developed terms of reference for the evaluation. These were discussed and endorsed at the December meeting of the PPMC, at which time an Evaluation Reference Group (ERG) was also nominated.

1.2. Structure of the Report

The first five sections of the report give information on the evaluation purpose, framework and methodology used for the CCEE. These sections are closely based on the Inception Report, submitted and approved by CRP managers and the Evaluation Reference Group in August 2014. Section 2 sets the stage by identifying relevant global trends in livestock and aquaculture production and consumption. To assist readers not already familiar with CRP 3.7, Section 3 gives a brief overview of the program. The purpose, audience and scope of the evaluation are described in the fourth section. The evaluation framework and methodology are presented and explained in Section Five.

The last two sections present the results of the evaluation. The main findings, recommendations and working suggestions are covered in Section Eight. Section Nine presents summary overall conclusions.

The first part of the annexes covers the evaluation terms of reference, evaluation framework and details about the evaluation methodology not included in main report. The remaining annexes cover the main information sources used for the evaluation, field notes for the visited sites, survey questions and results, the list of program documents reviewed, and details on the evaluation methodology, timing and organization drawn from the Inception Report, lessons learned, limitations of the evaluation and references.

⁵ Terminology has changed since the inception of the program. In the program proposal, VCD and other “components” were called components. These currently are called “themes”. There is now a transition to “flagships”, which is the terminology for the next phase. The specific components, themes and flagships are not fully comparable since there have been substantive changes in the scope of each original component as well as terminology changes. For this report, the term “theme” will be used except when specifically referring to proposals to the transition to flagships.

2. Context for Livestock and Fish Value Chains Development

2.1. Livestock Sector Trends⁶

Global livestock production has increased by more than 60 percent in the last 20 years (from 187 to 302 million tons) to meet growing demand; half of this is due to the increase in human population and the rest a result of increasing affluence in middle-income developing countries.

Over the past decade, there has been substantial growth in production of the Livestock and Fish commodities in all regions of the world. From 1992-2012, pig meat production increased 2.56 fold in Southeast Asia. In India, milk more than doubled from an already high level (now 16.6 percent of world milk). In South America, meat production doubled, more or less evenly across all sectors. In Africa, livestock production nearly doubled in meat (189%) and milk (218%). In East Africa, pig production led the increase at 218%. In southern Africa, pig meat production increased 164%. In West Africa, all sectors doubled but sheep and goat meat led at 237%.

During this same period, there has been rapid growth in international trade for livestock and meat. Global meat trade has risen from 15 million tons to over 40 million tons. The prime movers have been the USA (increased from 1.6 to 7.0 million tons) and South America (increased from 1.2 to 7.4 million tons). The growth in trade from the USA and South America includes not only export to Europe but also into developing country markets, in direct competition with local producers and traders.

In developing countries, there has been rapid commercialization of smallholder livestock production systems, although there remains great variation among and within countries. Opportunistic sale of live animals via informal routes remains prevalent and will continue to exist in the foreseeable future. A growing number of smallholders, however, are transitioning to participation in added-value chains in response to growing demand for processed meat and milk products.

Success in sustaining the involvement of small producers in commercial value chains is far from assured. Economies of scale demand that small livestock producers are grouped in some way, either through traders or cooperatives. Alternatively, small producers can turn to contract farming, which is becoming more common even in developing regions. Without organizational and institutional changes to address disadvantages stemming from very small scale operations, medium and large-scale livestock enterprises usually displace small producers in supply chains leading to larger towns and urban centers.

Commercialization takes different forms with different types of livestock. For example, contract farming arrangements are well developed in the poultry and pig sectors, often with large companies working with large numbers of small farmers. Aligned market linkages are common in dairy, including smallholder dairy through replication of hub milk collection models. On the other hand, beef and small ruminant value chains are more complex and less well developed. The latter are often associated with many small farmers, local markets and traders.

Value chain development support for improving and transforming smallholder livestock value chains must take into account the rapid changes in the livestock sector, and the diversity of commercialization trends within and between countries. Value chain development support must also take into account the roles of animal source foods in the livelihoods of poor livestock keepers and consumers, and how these are being

⁶ The information in this section is based on FAOSTAT (2014), FAO (2006), de Haan et al. (2001), Speedy (2003), and Castelo and Costales (2008)

and might be affected by commercialization and livestock value chains development. In light of the above, value chain development has to address not only requirements for improved technologies but constraints and enabling conditions stemming from many factors, including but not only sector policies and regulations, organizational and institutional capacities, access to support services, and social norms.

2.2. Aquaculture Trends

In 2012, global aquaculture production reached more than 90 million tons, and aquaculture is currently the fastest growing food sector in the world. Average growth rate over the last decade has been 6.2 percent – somewhat less than previous decades during which growth rates exceeded 10%. Aquaculture now contributes more than 50 percent of global food fish production. Asia is the most important producer, accounting for about 88 percent of world aquaculture production by volume. There are roughly 19 million fish farmers worldwide, with more than five million in China and three million in Indonesia.⁷

Though overall growth is still rapid, the rate of growth has slowed. Indeed production has fallen in some countries such as the US/Caribbean, parts of Europe, and historically strong producers such as Japan and the Republic of Korea. This reflects highly efficient large scale and low cost production of commodity species such as salmon, marine shrimp, *Pangasius*, and Tilapia from some countries; but also problems related to tsunami, flooding and disease in several major producing countries.

Production is highly concentrated: 15 countries produced 93 percent of all farmed food fish in 2012. However, systems and products are diverse, including export orientated (salmon from Norway and Chile, *Pangasius* from Vietnam, marine shrimp from Latin America and SE Asia, Tilapia from Latin America and the Caribbean); and domestically orientated (carps in China, milkfish in the Philippines, and Tilapia in Egypt).

The farming of Tilapia is now the most widespread type of aquaculture in the world, with production recorded in 135 countries. Production of this species in the Americas has increased from less than 100,000 tons in 2006 to over 300,000 tons in recent years.

Intensive production is the norm for internationally traded fish and an increasing proportion of production for domestic markets. Intensive production is highly dependent on formulated pelleted feeds. Feed inputs commonly comprise more than 70 percent of production costs in intensive aquaculture systems. Aquaculture feed is now mainly produced by multinational companies, and aquaculture feed is a globally traded commodity. In many countries therefore, the value added associated with aquaculture represents a relatively small part of market value. Moderate levels of productivity can be achieved without intensive feeding, especially for Tilapia and carp polyculture pond systems. However the economic incentives to specialize and intensify remain strong, and in most countries high volume/low margin tends to win out over low volume/high value.

Increasing global competition in production – with salmon and shrimp at the luxury end and *Pangasius* and Tilapia at the lower end – along with rising feed prices has resulted in reduced profit margins and rationalization of the industry in many countries to achieve economies of scale. The consumer and government led drive to increase transparency and quality throughout the value chain has reinforced this concentration, rationalization and commercialization.

Labor productivity is hugely varied ranging from around one ton/person/year in India and Indonesia to more than 200 tons per person per year in Norway.

⁷ FAO. 2014. The State of World Fisheries and Aquaculture 2014. Rome: FAO.

3. The CGIAR Research Program on Livestock and Fish

The Livestock and Fish (L&F) program is ambitious, innovative and complex. It is developing strategies and tools for linking core technical research with support for innovation in selected value chains. It is addressing productivity, policy, institutional capacity, gender and sustainability dimensions of value chains development. It seeks to build on CGIAR comparative advantage for sound technological and methodological research, and at the same time engages in partnerships in order to support uptake of innovations and scaling to achieve substantive developmental outcomes. The program is further complicated by a pragmatic strategy of building on and partnering with bilateral projects in Africa, Asia and Latin America. These projects have their own deliverables and life cycles.

The research and innovation support work of the program is focused on selected animal-source food value chains in nine countries: smallholder dairy in Tanzania and India; pork in Uganda and Vietnam; small ruminants in Ethiopia and Burkina Faso; aquaculture in Egypt and Bangladesh; and dual purpose dairy-meat in Nicaragua.⁸ In each country, research for development (R4D) sites have been established to serve as laboratories for refining methodological approaches, characterizing and assessing smallholder value chains, introducing and generating evidence on technological and institutional innovations, mobilizing resources needed to transform the selected value chains, and identifying strategies and mechanisms for scaling up.

There are significant differences among the sites. Several of the sites identified in the original CRP proposal have been able to build on active and highly complementary bilateral projects. In other sites, field activities under the program were launched only in late 2013. There naturally have been differences in the approaches and areas of emphasis across sites as well, stemming from country and value chain specific circumstances, previous and on-going support for technology and value chain development, and staffing patterns.

3.1. Program Goals

The goal of the Livestock and Fish program is to improve the performance of small-scale livestock and fish value chains in order to make meat, milk and fish more available and affordable to poor consumers. The focus of the program on pro-poor transformation of animal food-source value chains is a distinguishing feature⁹. Over the past decade, agricultural sector value chains work has tended to focus on strategies and innovations for integrating commercial and semi-commercial producers into chains leading to urban consumers and export markets. While there are ample lessons learned on how to develop value chains when there is strong market pull from middle and higher income consumers and significant, untapped opportunities for product development and differentiation, much less is known about priorities and approaches for upgrading animal food-source value chains leading to rural producers-as-consumers and poor consumers in local towns and urban centers.

Through its research and complementary action to support pro-poor transformation of animal-source food value chains, the program is intended to contribute to the CGIAR's system level outcomes (SLOs) - reduced rural poverty, improved food security, improved nutrition and health, and sustainably managed natural resources.

⁸ In the CRP proposal, Mali was identified as a site for small ruminants and Uganda was identified as a site for aquaculture. These were subsequently replaced by Burkina Faso for small ruminants and Bangladesh for aquaculture.

⁹ This includes specific and concerted attention to value chain transformations that empower women and increase their participation in livestock and fish value chains.

3.2. Intervention Logic

The intervention logic of the program can be summarized as follows:¹⁰

L&F scientists create research outputs in the form of pro-poor technological and institutional innovations. The four main categories of outputs include:

- Tested and refined pro-poor and gender responsive technological and institutional innovations¹¹
- Methods and tools for identifying and prioritizing appropriate value chain (VC) sites and interventions
- Partnerships, capacity and mechanisms for influencing attitudes and practices
- Strategies and mechanisms for scaling-up and scaling-out

Research outputs are exploited in research-for-development (R4D) platforms developed through partnerships, donor funding and private sector engagement. This is expected to lead to four R4D stage outcomes:

- Large scale R4D interventions funded and implemented
- Improved capacity, including adaptive capacity
- Improved coordination along the value chains
- Improved uptake of innovations

Successful R4D interventions are up- and out-scaled by the combined efforts of research and development partners, leading to six intermediate development outcomes (IDOs):

- **IDO1** Increased livestock and fish productivity in small-scale production systems
- **IDO2** Increased quantity and improved quality of the target commodity¹²
- **IDO3** Increased employment and income for low-income actors
- **IDO4** Increased consumption of the target animal-source food commodity
- **IDO5** Lower environment impacts
- **IDO6** Policies (including investments) and development actors recognize and support the development of small-scale livestock and fish production and marketing systems

¹⁰ The intervention logic described here reflects the conceptual framework included in the evaluation terms of reference. The program theory of change has subsequently been updated but the main categories of outputs as described here continue to reflect the main areas of work of the program's value chains teams.

¹¹ Institutional innovations include innovations in local organizations, value chain coordination and alignment and various policies, support systems and services impacting on value chains.

¹² Quality includes the safety and nutritional value of animal source foods.

3.3. Program Themes¹³

The delivery of research outputs and support for innovation and value chain upgrading are being carried out through six complementary thematic areas (which replaced the original nine program components):

- Animal health
- Genetics
- Feeds and forages
- Value chain development
- Targeting sustainable interventions
- Gender, impact and learning

The first three “technical” themes focus on diagnosis of bio-physical constraints and identification of potential technical solutions for smallholder farmers. Many of the scientists under these themes work in, but not exclusively in, the program’s R4D sites. All three themes provide support to value chain assessment, innovation testing and promotion, and capacity development – including capacities of technical specialists and other service providers to the value chain actors. An important role of the technical themes vis-à-vis the VCD work of the program is to identify quick win solutions.

The Value Chain Development theme focuses on value chain assessment and in-depth appraisal, refinement of appropriate VC methods, and development of partnerships to support innovation and value chain upgrading. The outputs for this theme include:

- Methods and tools developed and applied to identify potential interventions for improved VC performance
- “Best bets” piloted, validated and refined, also other new technical and institutional solutions, with partners and other value actors
- Mechanisms for scaling up and out the successfully tested strategies for upgrading VC; L&F documented influence that is fostering implementation at scale

The Targeting Sustainable Interventions (TSI) theme has thus far focused on support for site selection, including provision of background information for identification and selection of specific sites within countries. TSI is also responsible for helping to set priorities and assessing expected impacts of best-bet innovations. As data and information become available, TSI is expected to develop models to project livelihood and environmental outcomes – and support scaling out. In the light of the above areas of responsibility, the evaluation of the program’s value chain approach will need to address work under TSI theme.

The Gender, Impact and Learning theme has thus far focused mainly on increasing gender capacity in the program as well as with partners and value chain actors. The theme provides methodological support for gender differentiation in VC characterization and appraisal, and also for developing strategies and approaches to ensure inclusion of women and marginalized groups in livestock and fish value chains. These above areas of work are integral to the program’s value chain approach. The theme also has responsibility

¹³ Starting in 2015, the program structure will change and theme groups will be replaced by five program flagships. The program has already starting to use flagship terminology rather than reference to themes. Throughout the report, the terms “theme” and “flagships” will be used interchangeably except in contexts specifically covering specific changes in the new flagships. The value chains work of the program, which had been covered under the Value Chains Development theme, will fall under the Value Chains Transformation and Scaling (VCTS) Flagship. The characterization of strategies and priorities in the VCTS planning materials are somewhat different than they had been in the VCD theme description but there has yet been no direct impacts on the “on-the-ground” value chains work of the program. This evaluation focuses on what has been happening in the actual value chains work.

for developing the program's monitoring, evaluation and impact assessment frameworks, including further elaboration of the program's theory of change.

3.4. Program Partners and Management

The Livestock and Fish program is being implemented by four CGIAR centers: ILRI, ICARDA, WorldFish and CIAT. ILRI is the lead partner and is responsible for program management and support. ILRI provides leadership for four themes – Value Chain Development, Feeds and Forages, Animal Health and Targeting; and is responsible for value chain coordination in Tanzania, Uganda, Vietnam, India and Burkina Faso. ILRI also has lead responsibility for capacity development and communications work of the program. WorldFish has lead responsibility for the Genetics theme, and coordinates value chain work in Egypt and Bangladesh. ICARDA coordinates work on the small ruminant value chains in Ethiopia. CIAT coordinates the dual purpose milk-meat value chains work in Nicaragua.

Livestock and Fish is managed by a Management Unit led by Tom Randolph from ILRI, supported by two senior staff. Two committees have been established to advise and support CRP management. The Program Planning and Management Committee (PPMC) oversees planning, management and implementation of the program, and is responsible for reviewing and endorsing major decisions related to development and implementation of the program. The PPMC include representatives from all four centers. Amongst other responsibilities, the Science and Partnership Advisory Committee (SPAC) provides advice on strategies and priorities for ensuring the quality and relevance of the program's science, approaches and partnerships.

The program has engaged a wide range of partners, ranging from program-wide strategic partners to strategic and tactical partners in specific countries. Notable strategic partners targeted at the program level include the Netherlands Development Organization (SNV), GIZ, CARE International, Wageningen University Research (WUR) and the Swedish University of Agricultural Science (SLU). Strategic partnership agreements are under discussion with WUR and SLU. Partners at the R4D site level providing bilateral funding support include, among others, Irish Aid, IFAD, USAID, ACIAR, and SDC. A large number of implementing collaborators have been engaged at the R4D site level, particularly in the most active and advanced sites. There are strategic partners and collaborators for the technology themes as well as for the value chain development.

3.5. R4D Value Chain Sites

The cornerstones for the program's value chains R4D work are the nine R4D value chain sites. Four sites are the most advanced, while activities are still at an early stage in two replacement sites. A brief overview on the target sector in each country follows.

Aquaculture Value chains

Egypt

Egypt has experienced rapid growth in aquaculture production from less than 100,000 tons in 1997 to more than 1 million tons in 2012. This compares with imports of 135,000 tons, mainly of farmed fish from Vietnam, China and Thailand. The main species produced are Tilapia and mullet.

The country is unusual in so far as it produces these species under relatively intensive (pond) conditions in clearly defined production zones (152,000 ha) primarily for the domestic market. Pond development has been encouraged in large concentrated blocks downstream of agricultural activity allowing for relatively efficient product aggregation and distribution systems.

The sector benefitted from strong promotion by the government and USAID in the 1990s, including investment in pond infrastructure, hatcheries and feed production. However, producers are now being squeezed, with increasing input costs and stable or declining market price. The market chain is relatively poorly developed, distribution is limited in many parts of the country, and there has been limited penetration of higher value markets. There is therefore a need and an opportunity to strengthen it to the benefit of producers, consumers, and traders/processors.

There was a strong foundation for this site stemming from a decade of WorldFish work with various partners. Much of the previous work was technology focused but the transition to a VC approach was kick-started in 2011 and early 2012 by SDC funding. The development of fish value chains has already advanced to the stage of piloting and refining promising innovations, and laying the foundation for scaling out. Notable progress has included dissemination of a genetically improved strain of Nile Tilapia, delivery of best management practice training, and support provided for developing women retailer groups.

Bangladesh

The fish value chain in Bangladesh is far more complex than that in Egypt. Fish is the most important food after rice in Bangladesh. The country was the world's fifth largest aquaculture producer in 2013 (average annual growth rate 1985 to 2011 of 10%) contributing roughly 50% of total fisheries production, 4% of GDP and 5% of exports. It has more than 4 million homestead ponds, usually managed as low intensity carp poly-cultures, primarily for home consumption but with surplus production marketed. In parallel with these small-holder semi-subsistence systems there has been a rapid expansion in recent years of commercial smallholder aquaculture, mainly intensive production of *Pangasius* catfish and Tilapia using pelleted feeds, but also some expansion of semi-intensive carp poly-culture. These three dominant types of aquaculture function alongside and in close proximity to each other (Belton and Azad, 2012). The balance of aquaculture production is mainly high value shrimp and prawn production, culture based fisheries, rice-fish culture and cage culture.

Small scale semi-intensive pond aquaculture with mixed species (mainly carps, but increasingly Tilapia) for domestic markets has been promoted by aid agencies for many years, and small-medium scale shrimp and *Macrobrachium* mainly for export has developed rapidly in some areas. Intensive cage and pond culture of *Pangasius* (for domestic and export markets) has also grown rapidly in recent years. The range of species, input supply systems, production systems and market distribution systems are far more complex and varied than those in Egypt, and the number of players in the value chain is immense.

There is a substantial history of systems based approaches to aquaculture development in Bangladesh – farming systems research and development; sustainable livelihoods; integrated rural development – with a shift to more commercially aware value chain development initiatives in recent years. There is a substantial opportunity to work with a wide range of development agents to articulate and implement a “systems based” strategic response to the challenges identified in the situational analysis.

Startup work in 2013 built on a USAID-funded Feed the Future project. Emphasis thus far has been given to developing a coherent program working with various partners and projects. The first strategy and planning workshop was scheduled for August 2014. Bangladesh is also a major site for the Aquatic Agricultural Systems CRP, so there are opportunities for CRP links at many different levels.

Dairy and Dual-Purpose Value Chains

Tanzania

The Tanzania dairy industry is an obvious choice for a project on multidisciplinary value chain development for small farmers. With 21.3 million cattle in the country, improvements in the sector have great potential for improving living standards of the producers and contribute towards reduction of poverty. However, there are a number of challenges including: attempts to modernize and commercialize the dairy industry to make it competitive have been slow, production of milk is mainly from indigenous cattle, production is mostly for the domestic market, effects of seasonality and quality of feeds, and animal health constraints. Milk production is low due to the small number of dairy-type animals, systems of production and the low demand of milk and milk products. Another challenge faced is that the role of farmer groups in facilitating access to input supply and milk market is very small.

Tanzania is one of the most advanced sites, in part due to the timely provision of funding support by Irish Aid. The site was also able to build on substantial attention to and lessons learned from other smallholder dairy VC initiatives in Tanzania and East Africa. The program is providing support for a multi-stakeholder Dairy Development Forum (DDF) and is adapting and promoting dairy hub systems, drawing on lessons from the East Africa Dairy Development Project. Several diagnostic and planning activities have been undertaken, including rapid VC assessment, situational analysis, outcome mapping, VC benchmarking, and clarification of expected impact pathways.

India

Dairy development in India is frequently cited as a great success story through the development of dairy cooperatives such as that in Anand (Amul in 1946) and the work of the National Dairy Development Board and Operation Flood (1970-1996). Milk production in India is well organized and production has risen from 55 million tons in 1991-2 to 132 million tons in 2012-2013 (NDDDB figures). The choice of India puts extra pressure on the program to demonstrate the added value brought by the value chain R4D approach of Livestock and Fish.

India is one of the late starting sites. Bihar has been identified as a priority on the basis of a situational analysis and follow up work on site selection was completed in 2014. Follow up action has started, including partnership building, training for milk producers, and strengthening of innovation platforms. Workshops have been held for identification of impact pathways and strategy and implementation planning.

Nicaragua

The most important livestock production system in Nicaragua is dual-purpose beef-milk cattle. Most dual-purpose farms are small. Women play an important role in these production systems. The country also has larger export oriented producers for both milk and beef. Nicaragua is a competitive exporter of both milk and beef. Over the past decades the values of milk and beef exports have increased more than 15 percent annually.

The dairy manufacturing sector includes both formal and the informal sectors. Between 2006 and 2012 the industrial processing capacity of the formal sector almost doubled, with a sharp increase in the proportion of milk flowing through the larger plants and the semi-industrial cheese sector. The informal sector is formed by a large group of small size artisan cheese factories supplying the domestic and export markets through a large network of intermediaries. This artisan product is mostly undertaken by women for local and domestic consumption.

Nicaragua is a moderately advanced site. Value chain diagnosis and a situational analysis were major foci for 2012 and 2013, along with partnership building and efforts to mobilize funding through new projects. Several workshops and information exchanges have been organized with value chain actors and stakeholders.

Pig Value Chains

Uganda

Pork consumption is relatively less than that of beef and mutton in Africa. But Uganda is an exception where pork is second to beef and is growing. The background proposal notes that rapidly increasing production and consumption of pork within the country is driven not only by population growth, but also by a combination of rising incomes and changing preferences associated with urbanization. There is growing demand for processed products as street food and for supermarkets, and emergence of formal-sector enterprises. Furthermore, there is a growing base of smallholder producers with potential for intensification.

The pig value chain has pro-poor potential. There is growing popularity of pig keeping among smallholder households (17% of all households currently keeping pigs), with potential for intensification. Pig keeping in smallholder systems is largely considered a woman's activity. Many market agents along the value chain (input/livestock traders, meat processors and transporters, etc.) provide potential for increased income and employment from adding value. Pork is increasing in popularity as a low cost street food and as a meat product sold in informal markets.

Uganda is one of the more advanced sites. VC rapid assessment, situational analysis, outcome mapping and GIS characterization have all been undertaken. Specific sites and best-bet innovations have been identified, and several feedback and consultation workshops held. The program is participating in and helping to support the Ugandan Pig Stakeholders Platform, and is working through the Smallholder Pig Value Chain Development project funded by IFAD and the European Union, and a new phase funded by Irish Aid. Impact pathways have been identified.

Vietnam

Pig production is the most important livestock sector in Vietnam with some 26.3 million pigs in 2013. It increased rapidly from 15 million in 1993 to 27 million in 2005 but has leveled and declined slightly since then due to disease problems.

There have been some major animal disease threats affecting the pig industry in Vietnam. Besides FMD, the arrival of a 'new' disease, PRRS or Blue Ear Disease, has had a devastating effect. It is now regarded as endemic and seriously impeding development of the industry as well as hitting small producers with high losses.

ILRI has been working in Vietnam for some years. The project, "Improving the competitiveness of pig producers in an adjusting Vietnam market," ran from 2007-2010. The project was intended to identify an appropriate policy and technology framework and forms of market and institution coordination that will allow smallholder pig producers in Vietnam to competitively raise their incomes through better access to higher value market chains. The project was implemented under ILRI's Livestock Market Opportunities Theme. The project research was conducted in eight provinces.

The program in Vietnam is well positioned to build on earlier ILRI research and projects in Vietnam. The program can also build on strong government interest in transforming smallholder pig production systems. The program is working in partnership with the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH). Value chain assessment and situational analysis work have been completed and the transition to a greater focus on innovations assessment is underway.

Small Ruminants Value Chains

Ethiopia

There is high and increasing demand for sheep meat in Ethiopia and for export, mainly to the Middle East. There is great potential to increase productivity from its current low level and offtake rate. Furthermore, both men and women are involved in production and there are good opportunities for income for women headed households. There are many market agents involved in the VC and this provides both potential and challenges.

Some of the main challenges faced in developing small ruminant value chains in Ethiopia include: negative selection of breeding rams, feed supply fluctuations and quality, poor animal hygiene and high mortality, lack of organization of breeder and producer groups, poor market infrastructure and institutional arrangements, poor input supply and services, and lack of abattoir facilities. ILRI and ICARDA both have a long presence in Ethiopia.

Ethiopia is one of the program's advanced sites. Value chain assessments and reports have been completed for eight specific sites. The situational analysis is complete and benchmarking was launched early in 2014 to support quantitative VC analysis. Best bet interventions have been identified and prioritized. Several workshops and other meetings have been organized to clarify priorities and impact pathways.

*Burkina Faso*¹⁴

There are over 20 million sheep and goats in Burkina Faso. About 30% of total meat supply comes from small ruminants. Sheep and goats are key household assets for poor households contributing to incomes and food security, and serving as a form of savings. Small ruminant production is predominantly extensive in nature, although there are important differences associated with different agro-ecological zones. Some of the main constraints to smallholder production include seasonable fluctuations in feed, shortage of water and risk of drought, and various animal diseases.

There has been a steady increase in the numbers of both sheep and goat slaughtered each year to meet domestic demand. Burkina Faso is also a supplier of small ruminants to Cote D'Ivoire, Ghana and Benin. Exports include both live animals and skins. Skins are actually the highest value livestock commodity from Burkina Faso. The high offtake rates, processing and by-products utilization and importance of exports all distinguish the site in Burkina Faso from Ethiopia.

Burkina Faso is a replacement site.¹⁵ After a decision to shift from Mali, program activities started only in the last quarter of 2013. So far, work has focused on stakeholder engagement and assessment of constraints and opportunities for small ruminant value chains.

¹⁴ Information based on an Issues Brief for the 9th PPMC meeting on the Burkina Faso small ruminants value chain business case.

¹⁵ Mali was replaced due to uncertainty associated with political instability.

4. Purpose and Scope of the Evaluation

4.1. Evaluation Purpose

During the first two and one-half years of the program, the PPMC and SPAC identified and considered many issues related to the program's value chains R4D approach that might require adjustment and adaptation to enhance the effectiveness, efficiency, relevance and quality of scientific outputs, including:

- Emphasis on pro-poor and social transformation of value chains¹⁶
- Alignment of activities across sites and partners
- Stability and efficiency of planning and reporting procedures
- Scope of the interventions and choice among potential priorities
- Impacts of bilateral projects on the program's value chain approach
- Synergies and overlaps between VCD and the other program themes
- Integration and complementarity of animal science and social sciences
- Engagement with private sector partners and service providers
- Involvement with policy change and implementation
- Pace in moving from diagnostics to value chain upgrading

The purpose of the evaluation was to assess the above and other strategic issues the program is dealing with such as the potential for scaling up models for linking smallholder producers to markets, including through public-private partnerships. The evaluation primarily focused on the effectiveness of the program in developing, supporting and implementing the value chain approach at the R4D sites. The evaluation also addressed the relevance and efficiency of the program's value chain approach with some attention to quality of science issues.

4.2 Evaluation Clients

The main clients for the evaluation are the managers, scientists and partners actively involved in the Livestock and Fish program. Perhaps most important are the program managers, both in Nairobi and at the field sites, along with the program's governance and advisory committees. The value chain coordinators (VCC) are particularly important since they are responsible for all aspects of program implementation at the R4 sites. The SPAC already has an evaluation and advisory function; this evaluation can be viewed as being directly supportive of the SPAC's on-going function.

The strategic partners of the program are also key clients, particularly the financing partners. Thus far, a significant percentage of the program's resources have been mobilized through bilateral projects. The value chain R4D work of the program will be central to retaining the support of current bilateral funding partners and attracting additional partners.

As per CGIAR evaluation guidelines, the evaluation clients also include the ILRI Institutional Management Committee (IMC) and Board of Trustees (BoT), and the Independent Evaluation Arrangement (IEA) of the CGIAR. The evaluation is expected to provide information to ILRI, as the lead center, to help it carry out its program oversight responsibility. The evaluation is also expected to point to key issues the CGIAR IEA might want to address as it turns to the CRP-wide Independent External Evaluation (IEE) scheduled to take place in 2015.

¹⁶ Social transformation refers to transforming value chains in a manner that takes into account the possible impacts of social and cultural roles, perspectives and norms on different participants in value chains, and seeks to identify and promote changes that will lead to gender-sensitive and equitable opportunities and outcomes.

4.3. Evaluation Objectives

The overarching objective of the evaluation was to provide information and recommendations to support strategic decision making on the program's value chain approach. One specific objective was to identify what is working well and can serve as the foundation of a viable and sellable program approach; and what is working less well and therefore requires some attention. A second specific objective was to assess the impacts of program level value chain coordination on value chains work at the R4D sites. A third specific objective was to assess the effectiveness and efficiency of the approaches being used at the R4D sites to identify priorities, introduce and assess innovations, and support value chain upgrading.

4.4. Evaluation Scope

The evaluation covered the period from the start of the program in 2012 through September 2014. The evaluation started with desk review covering program wide initiatives, reports and management records, as well as reports from all R4D sites. The desk review confirmed, as stated above, that some of the R4D sites were still quite early in implementation. For this reason, the field visit phase of the evaluation extended only to program management at ILRI and four of the R4D sites that were relatively advanced. Coverage of the sites not visited was based on documents review, a survey of Livestock and Fish program staff, and email exchanges with the value chain coordinators. Information from the desk review, field site visits and survey were assembled and analyzed to provide, to the extent possible, coverage of all sites.

The evaluation covered all of the value chains R4D work of the program. This is a somewhat broader scope than called for in the original terms of reference. The ToRs called for a focus on the VCD theme and the value chain selection activities under the Targeting Sustainable Interventions theme. The desk review showed, however, that scientists from all themes had been supporting activities in the program's R4D sites; these activities directly relate to and constitute part of the program's value chain R4D approach. It is the sum-total of the work at the program's R4D sites that that define the nature of the program's value chain approach, not work carried out specifically by the scientists with time allocations to VCD or TSI.

5. Evaluation Approach and Methodology

The evaluation approach was consultative and participatory, based mainly on dialogue, meetings and surveys with program staff, partners and external stakeholders. This section gives an overview of the evaluation framework, sources of information and data, and the approaches used to analyze findings and develop recommendations.

5.1. Overview of the Evaluation Framework

The evaluation framework focused on four main areas of investigation and twelve specific evaluation questions:

Program design

- 1) How appropriate are the conceptual framework and theory of change?
- 2) How appropriate were country and sector selection?

Program management

- 3) How effective and efficient has been VCD coordination and oversight?
- 4) Have financial and human resources been sufficient?

R4D implementation

- 5) How appropriate have been the VC research agendas?

- 6) How strong are synergies between VCD and other thematic research?
- 7) To what extent has there been sufficient and effective multi-disciplinarity?
- 8) How appropriate and effective has been partnership and stakeholder engagement?

Outputs to outcomes

- 9) What progress has been made in technological and institutional innovation?
- 10) What progress has been made in value chain upgrading?
- 11) What are prospects for scaling?
- 12) What are prospects for achieving progress on the IDOs?¹⁷

While all twelve questions are important to an evaluation of the program's VC approach, the four questions corresponding to R4D implementation were given the highest priority since they cover implementation strategies and actions at the field sites. The four questions corresponding to program design and management impact heavily on the program's value chain approach but delve into program-wide issues. Only aspects specifically impacting on elaboration and implementation of the value chain approach were addressed in the evaluation. The questions corresponding to "outputs to outcomes" were, to a certain extent, premature at this stage in the life of the program. Nevertheless, it was important to ascertain whether the program's value chains R4D work had (a) started to make progress on identifying innovations and value chain upgrading, and (b) was laying a solid foundation for scaling and contributing to the programs intermediate developmental outcomes.

The evaluation framework attached as Annex B shows the evaluation questions and corresponding indicators. Most indicators were based on questions identified in the evaluation terms of reference. Some indicators were based on the program rationale and outputs as summarized in the terms of reference, but not covered by the original set of questions. A few indicators were added to address issues identified in the IEA guidelines but not included in the terms of reference. Seven indicators were added by the evaluators.

The evaluation framework in Annex B shows in the columns to the right the relationship of each indicator to the CGIAR evaluation criteria. While there is room for interpretation on the linkages shown between specific indicators and CGIAR criteria, the overall pattern reflects the emphasis of the evaluation on the effectiveness of the program in developing and implementing its value chain R4D approach. More than twice as many indicators relate to the program's effectiveness than for any of the other CGIAR criteria.

5.2. Information and Data Sources

The main information sources for the evaluation were as follows:

- Program documents – mainly annual reports including theme and site reports
- Group meetings – carried out during field visits with program staff, stakeholders and producers
- Informant interviews – carried out during field visits with staff, partners, government officials and value chain actors
- Questionnaires – a questionnaire targeted to program staff at all sites; a second questionnaire targeted to partners and stakeholders at the four R4D sites visited; a questionnaire targeted to selected VC experts and members of the program's Science and Partnerships Advisory Committee

Other sources of information included:

- Management records – primarily committee minutes
- Program progress indicators – sub-set of the program's monitoring indicators, updated through mid-2014
- Program wiki – including blog, stories and other information on the program website
- Work plans – including the program logframe

¹⁷ Identified in Section 3.2

- Case stories – including value chain business models, innovation histories, institutional change histories

The main categories of respondents included:

- Program staff – including program management, VCCs and theme leaders, and program scientists
- Partners – implementing partners including seconded national staff, financing partners, and contract service providers if engaged in program on on-going basis
- Value chain actors – producers, buyers and service providers (input suppliers, transporters, etc.)
- External stakeholders – including:
 - Officials from national producer and private sector organizations
 - Public sector officials with responsibilities related to L&F VCD
 - Technical staff of developmental agencies and NGOs involved in VCD
 - Value chain actors not involved in program
 - Research and development peers not involved in program
 - Contract service providers if not currently involved in program
- VC experts from organizations known to be active in VC development work, including members of the PIM value chain analysis and development group
- Members of the SPAC

The table attached as Annex C shows the main sources of information for each indicator, and the target respondents for the questionnaires, informant interviews and group meetings.

The purpose, sampling procedures, approaches for the group meetings, informant interviews, questionnaires, case stories and indicators are described in Annex D.

5.3. Field Visits

Field visits were carried out to ILRI headquarters and four of the R4D sites. The field visits were essential for exploring issues directly with value chain coordinators, program scientists, implementing partners, value chain actors (expected beneficiaries) and external stakeholders familiar with program activities. The field visits also made it possible to briefly observe activities in one or two sites per country.

The four R4D sites visited were Ethiopia, Uganda, Tanzania and Egypt. These sites were chosen for pragmatic reasons. They were the four most advanced sites and had all been active since the start of the program. The sites together cover all four of the target animal food source value chains being covered by the program. Three different centers, out of the four partner centers, have lead responsibility for site coordination. The four sites are also the closest geographically to each other and to ILRI headquarters.¹⁸

The evaluation was planned to follow a standard sequence of activities at each site. The purpose was to enhance comparative analysis across sites. Prior to the start of the site visits, the value chain coordinators were provided with an indicative schedule for the field visits, shown below.

¹⁸ Implications of not having been able to visit the other sites are discussed briefly below in the section on limitations of the evaluation.

Nairobi (ILRI headquarters) – start-up
 Introductory briefings and dialogue with the program manager and evaluation manager
 Group and individual interviews with the program managers, ILRI senior managers, leaders (some via Skype) and scientists based in Nairobi for all program themes, and representatives of other CRPs based in Nairobi (CRPs 2 and 6)
 Revision and finalization of Inception Report; follow up on logistics for R4D site visits
 R4D Field Site Visits
 Day 0 (arrival day)
 Planning and preparatory meeting with VCC and others people responsible for organizing the visit, in order to go over scheduling and logistics
 Day 1
 Startup program staff meeting, with selected partners, for facilitated discussion covering: (a) program design and strategy, (b) program management, (c) partnership, (d) identification of innovation and institutional change stories, (e) research planning, and (f) outputs and outcomes.
 Day 2
 Key informant interviews with developmental agency, organization, donor and project staff, government and regional organization officials and staff, national producer and private sector organizations, and commercial value chain actors
 Days 3 and 4
 Field site visits for individual and small group dialogue with field staff, local officials and value chain actors, and group meetings with producer representatives. Key informant interviews after return if time allows
 Day 5
 Multi-stakeholder wrap-up workshop

- Present emerging findings
- Facilitated discussion on partnership and value chain research issues
- World café for recommendations development

Debriefing meeting with selected program staff and partners; officials if required
 Nairobi (ILRI Headquarters) – wrap up
 Debriefing meetings with CRP leader, CCEE evaluation manager and ILRI senior managers
 Presentation on interim findings, conclusions and recommendations
 Discussion on follow up for completion of the evaluation report

5.4. Analysis and Synthesis of Findings

Field Notes¹⁹

Detailed notes were taken throughout the field site visits, covering group meetings and informant interviews. Summary notes were prepared for each site ranging from eight to 22 pages, with an average of 14 pages each. There was qualitative comparative analysis of the issues noted in the summary notes, comparing and contrasting information across sites and respondent categories. Specific observations of key informants, in particular, were noted and incorporated into appropriate parts of the findings. Particular attention was given to the results of the wrap up workshops, especially participatory SWOT analyses and “world cafés for recommendations development”.

Program Documents²⁰

¹⁹ Annexes E to H give summary information for the four R4D site visits, including an overview of activities, selected findings and working suggestions for each country. Annex I identifies the people met during the field visits.

²⁰ The list of program documents and presentations reviewed is given in Annex J.

The main contribution of the review of program documents was comparative analysis of progress and methodological approaches across the R4D sites including the sites not visited. This was especially important for the analysis of the program's core methodological toolkit, including situational analyses, targeting and site selection, value chain assessments, and impact pathways. Documents review was also the main foundation for assessment of the gender analysis component of the value chains R4D work, follow up research agendas (animal science, value chain technologies and social sciences), and contributions to value chains upgrading.

To give a basis for comparative appraisal, document were collected related to all of the above and put into separate folders. Where documents were missing (from the wiki) for different sites, the value chain coordinators were contacted and asked for any drafts that were available. Once documents were complete to the extent possible, notes were extracted on specific approaches for each site to give a basis for comparing similarities and differences across sites. In several cases, and tables were prepared to summarize key feature at each site.

Surveys²¹

The numbers of people asked to participate in each survey and numbers of respondents are summarized in the following table.

Table 1: Survey Respondents and Response Rates

| Survey | People Contacted | Respondents | Response Rate |
|---------------------------|------------------|-------------|---------------|
| Staff | 82 | 44 | 54% |
| Partners and stakeholders | 113 | 27 | 24% |
| VC experts and SPAC | 40 | 7 | 18% |

Analysis of the closed ended questions for the staff and partner and stakeholders surveys was based on frequency counts and percentages. Color coding was used to identify questions on which there was strong agreement, versus mixed results, versus relatively large numbers of disagreement. These patterns were summarized and have been inserted in text boxes in the findings section of the report below.

For the staff survey, cross-tabulations were used to assess differences depending on gender, theme affiliation and institute. There were too few responses to do statistical analysis, and so the identification of differences was based only on the ratios agreeing to the ratio disagreeing. In cases where there were clear differences in the ratios for the classes of each category, these were noted and identified when describing the survey findings.

Open ended questions for all surveys were listed, reviewed and used to prepare a textual synthesis for each question. For the staff survey (and only for that survey) there were enough responses to use keyword coding to identify patterns of frequent responses for each question. The results were incorporated into the text in the appropriate section of the findings. The open-ended responses were very useful in identifying issues, differences in perspectives, and potential recommendations.

²¹ Annex K give summary results for the closed-ended questions and lists the responses to the open-ended questions for all three surveys.

5.5. Development of Recommendations

Recommendations were developed in an iterative manner throughout the field visits. During meetings with the program staff, starting in Nairobi and continuing in the other sites, the sessions started with the shortlist of topics identified in the Inception Report. The discussions were, however, quite open and the evaluation team injected challenging questions and observations in order to deepen appreciation of the issues covered in the Evaluation Framework. Over the course of the nearly six weeks in the field, more and more specific observations and suggestions were made in the meetings with the program staff. Issues emerging as major concerns received disproportionate attention. As suggestions and observations were made to the staff, the staff was in turn encouraged to come up with their own suggestions for going forward. These suggestions were noted and raised in turn in future meetings in the same locations and in following countries. This process led to a focusing in on key issues and potential recommendations to improve the value chains R4D approach.

During each R4D site visit, a substantial amount of time was spent with the value chain coordinators. The discussions generally started with an emphasis on getting more information about the site activities and working conditions. During the week spent in each country, the discussions turned to the emerging observations of the evaluators on strengths and weaknesses of each site's particular approach. The observations and potential solutions were discussed with the VCCs since they are the most knowledgeable people about what is going on and what can feasibly change without too much disruption.

By far the most important step in recommendations development during the field visit stage of the evaluation was the wrap up workshop in each country. The standard format was used for the first R4D site visit in Ethiopia. That was the least worthwhile workshop as far as recommendations development since there was not enough time (end of the workshop, at end of the workday, at the end of the week). In the following sites, the issues covered in the workshop were adjusted somewhat in order to reflect the observations of the evaluation team. This opened the way for discussion on the issues and recommendations for moving forward. In each workshop, time was allocated to either plenary or small group discussion on specific "problem" issues, giving participants the opportunity to make suggestions on how to address these. The instructions and implementation approach for the world café for recommendations development were greatly improved as well. In three sites, SWOT analyses were discussed or carried out as part of the workshops as another mechanism for participatory identification of critical issues and potential recommendations. The wrap up workshops directly engaged program staff, partners and external stakeholders in joint analysis of the main questions in the evaluation framework, synthesis of findings and conclusions, and identification of lessons learned.

The timing of the field visits coincided with the September meeting of the program's Science and Partnerships Advisory Committee. A side visit was made to meet with the SPAC in between the third and fourth country site visits. During this meeting, the evaluation team leader shared emerging findings and observations, leading to follow up questions and discussion with the SPAC. This interaction helped to clarify key issues that required attention during the development of recommendations.

Following the country site visits, a presentation was made to interested and available program staff in Nairobi. During the presentation and associated discussion, there was useful feedback helping to clarify priority issues and potential solutions.

In brief, to the maximum extent possible, a participatory and interactive approach was used for recommendations development. There were ample opportunities throughout the site visits for the evaluators to share and discuss prospective recommendations. These discussions also helped to determine relative priorities and the feasibility of potential recommendations.

Ultimately, the key to being able to integrate findings across all of the above – the documents review, surveys, written inputs, indicators and field visits – was systematic use of the evaluation questions and indicators in developing the questionnaires and the protocols for the group meetings and informant interviews. Information related to the evaluation questions and indicators was collected from different respondent categories in different locations through a diversity of approaches, some highly structured and some only semi-structured. Information from all of these sources was woven together to prepare the findings – noting to the extent possible the main sources of information when the findings are reported.

5.6. Acknowledgment of Changes

A serious effort was made to implement the evaluation as closely as possible to the scope and approach identified in the inception report. Inevitably some changes were made along the way, particularly during the field visits in order to accommodate scheduling requirements and constraints. Some additional changes were made during analysis of results and preparation of findings. However, none of these changes substantively affected the evaluation scope or implementation approach. More specific information on the changes from the evaluation terms of reference to the inception report, and from the inception report to the final report is given in Annex L.

The only substantive change impacting on the presentation of finding and recommendations was an updating of the evaluation matrix following the comments received on the first draft of the evaluation report. These changes included: (a) separating program design from program management and (b) adding two evaluation questions – one related to the appropriateness of sector and country selection, and another related to the sufficiency of human and financial resources. Both of these issues had been covered as indicators for other questions but were substantive enough to justify separation into distinct evaluation questions. The changes in the evaluation matrix, including minor changes in some indicators, are shown in the table in Annex B.

8. Findings and Recommendations

The Livestock and Fish program “brings together collective capacity with CGIAR and other partners to develop and deliver appropriate integrated solutions for the pro-poor transformation of selected value chains” (L&F 2013 annual report). Several program documents, starting with the Livestock and Fish proposal, stress that the Livestock and Fish model represents a new way of working for CGIAR.

The value chains R4D work in the selected sites is the most distinctive and defining feature of the new model. The Value Chains Development Theme, recently reshaped as the Value Chain Transformation and Scaling (VCTS) Flagship, is the part of the program responsible for engagement with partners in the selected value chains. Through the value chains work in nine target countries, new methods are being piloted for assessing pro-poor value chains for animal-source foods, evidence is being generated on potential technological and institutional innovations, and partnerships are being forged with development partners to translate potential solutions into development interventions at scale. The recently stated objective of the VCTS is to “ensure research results and CRP Livestock and Fish results respond to the demands of the individual value chains, and are being integrated, tested, adapted, and refined to facilitate the transformation of the value chain, guarantee scaling through alliances and learning processes.”

The 2013 progress monitoring report for Livestock and Fish notes that the program has faced a number of challenges in implementing its value chains research for development approach,²² including:

- Resourcing and managing the ambitious plan of work described in the program proposal
- Developing internal capacities and modalities to implement the proposed value chain approach

The findings presented below address both the unique features of the value chains R4D approach of Livestock and Fish and the challenges faced in implementing the approach. Is the value chains work making the contributions expected in the broader framework of the Livestock and Fish program? What progress has been made in developing and refining the approach? What are the prospects the Livestock and Fish value chains R4D will stimulate and catalyze value chain upgrading and scaling? In brief, as indicated in comments provided by the ERG on the first draft of the evaluation, “Can we state, in some fashion, whether the approach is achieving its objectives, or is on its way to doing so?”

The finding and recommendations are presented in four sections corresponding to the main clusters of evaluation questions: program design, program management, R4D implementation, and outputs to outcomes. In each section, the evaluation questions are posed and relevant findings presented.²³ At the end of the sub-sections for each evaluation question, the key points from the findings are highlighted. These are followed by recommendations and working suggestions. The recommendations identify specific actions to effect essential changes in the program’s value chains R4D approach. Working suggestions are in effect second level recommendations. These are classified as working suggestions rather than recommendations for one or a combination of reasons:

- Resources might not be sufficient for addressing all recommendations and so this distinction serves to identify relative priorities among recommendations
- All are highly desirable but perhaps are not as essential as are the recommendations
- Some relate to program level issues and could wait for validation by the IEE

²² While Livestock and Fish is working with partners to support the development of selected value chains, the program is first and foremost a research for development program, not a value chains development program (personal communication provided during review of first draft). AR4D uses research to identify options and generate evidence to mobilize development investment. Development actors remain responsible for upgrading and scaling as development actions.

²³ All pink shade text boxes aligned to right margin summarize results from the three surveys. Wording is based on the survey questions. See Annex K for complete survey data and results.

- Some are general guidance and do not require specific follow-up action

Follow up on recommendations and working suggestions will require action by the program managers and value chain coordinators. For each recommendation and working suggestion, an indication is given as to whether the main responsibility for follow up is expected to be at the program manager (PM) or value chain coordinator (VCC) level.

8.1. Program Design

This section gives findings on the two evaluation questions related to the program design:

- How appropriate are the conceptual framework and theory of change?
- How Appropriate were sector and country selection?

1) How appropriate are the conceptual framework and theory of change?

This question was addressed by reviewing the Livestock and Fish proposal, the program's Results Strategy Framework and Intermediate Development Outcomes (IDOs) (version 2, April 2013), the conceptual framework diagram in the evaluation terms of reference (see Annex A), the updated Livestock and Fish Theory of Chain (August 2014), and the draft impact pathways being developed for the selected value chains at the R4D sites.

Conceptual Framework

The Livestock and Fish proposal, conceptual framework diagram, and the 2013 Results Strategy Framework identify a number of assumed and expected contributions of value chains R4D to the overall Livestock and Fish program. These are summarized in the following tables.

Table 2: Contributions of Value Chain R4D Strategy to Program

| Value Chain R4D Strategy | Assumed Contributions to Program |
|---|---|
| Address whole value chain | Improve relevance, uptake and effectiveness of innovations |
| Focus and targeting on limited number of value chains in specific countries | Increase efficiency and the probability of achieving proof at scale |
| Implementation of demand driven innovations in the right value chains with partners | Accelerate the program's progress towards achieving outcomes and impact |

Table 3: Contributions of Value Chain R4D Outputs and Outcomes to Program

| Value Chain R4D Outputs and Outcomes | Expected Contributions to Program |
|--|--|
| Methods and tools for identifying and prioritizing appropriate value chain sites and interventions | Research responds to real time needs and constraints |
| Sector and policy analysis | Understand the broader context within which the target value chain functions |
| Innovative models of building partnerships and capacity development | Strong and sustainable partnerships and capacity to implement the interventions, including increased research and business expertise |
| Tested and refined pro-poor and gender responsive technological and institutional innovations tested and refined | Evidence on how the interventions lead to improved value chain performance and enhanced equity |
| Strategies and mechanisms identified for scaling-up and scaling-out | Implementation designs for large scale value chains interventions; support the establishment of |

| | |
|---|--|
| | enabling pro-poor policy and institutional environments |
| Funds mobilized for implementation of large scale development interventions | Allow the intervention strategies to be deployed at scale in target value chains; translate research results into pro-poor and gender-responsive transformation of selected value chains |
| Knowledge partners to the development interventions | Improve the effectiveness of the intervention and learn from its successes and failures |
| Proof demonstrated at scale | Replicate and generalize results through additional development investments and Impact Pathway 2 |
| Engage stakeholders in other countries of the region | Second generation development projects for scaling out the intervention |

The statements on assumed and expected contributions represent an appropriate conceptualization of the role of value chains work in the context of a broader R4D program. This assessment is based on the challenges faced in agricultural sector R4D as identified in during the first Global Conference on Agricultural Research for Development (Horton and Prain 2010) and the GCARD road map for transforming AR4D (GFAR 2011). Some of the key problems identified included fragmentation, under resourcing, inadequate attention to specific contexts and wider developmental contexts, and weak linkages with farmers, NGOs and the private sector. The strategic elements of the GCARD road map included:

- Inclusively defines key AR4D priorities and actions, driven by evolving national, regional and global development
- Invests in ensuring equitable partnership and accountability among all stakeholders of agricultural innovation and developmental change
- Actively achieves increased investments in human, institutional and financial resources for AR4D systems to meet demands in development
- Develops required institutional capacities for generation, access and effective use of agricultural knowledge in development
- Effectively coordinates linkages relating agricultural innovation to development programs and policies
- Demonstrates its value and gains recognition by society through involvement of stakeholders in effective demonstration and reporting of outcomes (GFAR 2011)

The role identified for the value chains work under Livestock and Fish directly aligns with the GCARD road map. To the extent the value chains work is able to deliver on assumed and expected contributions, it has the potential to make an instrumental contribution to enhancing the relevance and effectiveness of Livestock and Fish as an agriculture R4D program. Most of the findings in the following sections focus on the extent to which the value chains work is likely to deliver on its role and expected contributions.

*Theory of Change*²⁴

The recently updated program theory of change well depicts the key role of the program's value chains work. Under the updated model, the value chains R4D work of the program has responsibility for integrating technical options at the R4D sites, and building capacities and partnerships to support scaling of validated, integrated interventions. Specific action areas and outcomes are identified for VCTS flagship together with the other four flagships, and are logically linked to both the program's intermediate development outcomes and the four CGIAR system level outcomes.

²⁴ The following discussion refers to the updated theory of change, made available in August 2014 – after the CCEE started.

The new theory of change is clearer in terms of how the program expects to generate outcomes “for the poor” and “by the poor” than was the previous conceptual framework diagram included in the evaluation terms of reference (see Annex A). The previous conceptual framework did not distinguish these pathways. Another important clarification in the new theory is acknowledgement that productivity and efficiency improvements will be the main drivers for most of the IDOs and SLOs. The reality on the ground in terms of both strategies and competencies is that the value chains work of the program is mainly focused on improving productivity and efficiency; it is useful to be transparent about this. This does not mean that the value chains work will not work on or be accountable for outcomes related to employment, food supply systems, nutrition of the poor, etc. but does mean that the value chains work can focus mainly on core competencies and the comparative advantage of the partner centers.

The VCTS theory of change starts by stating that the flagship “mimics the overall program approach”. This is as would be expected since the value chains work of the program is the mechanism through which the most outputs of the other flagships get translated into improvements in value chain productivity and efficiency (IDO 1). Three main action areas drive the VCTS theory of change: learn through multi-stakeholder platforms, develop capacities through partnerships, and “integrate and implement at scale”. What specifically is meant by the last is not explained in the text. It is explained in the VCTS SIP that this refers to piloting integrated outputs from the other flagships. In the next stage of the VCTS theory, the value chain work is expected to ensure that program outputs respond to localized demands to facilitate value chain transformation.

The assumptions in the program and VCTS theories of change are reasonable as hypotheses but lead to a number of unanswered questions. For example, improvements in value chain efficiency and productivity will not necessarily improve diets for poor producers if decision makers in those households choose to buy other goods and services once they get better prices for their animals, milk or fish. On the other side, improvements in value chain performance and efficiency by some value chain actors could simply displace other suppliers still operating under inefficient local market channels, with uncertain net impacts on equity and employment opportunities for the poor. Even for the participants in the improved chains, there are risks: efficiency gains along value chains often lead to less employment, not more employment. Productivity and efficiency gains can be and often are achieved at the cost of increased environmental stresses, as research on the broader “livestock revolution” showed.

Theory of Change and Impact Pathways
 Nearly all the program staff agreed that the program Theory of Change is clearly articulated. Only around half agreed that the pathways are sufficient for assessing priorities and progress, or that the assumptions are valid.

The list of “what ifs” about the theory of change and related assumptions could go on. The point is not that they are not appropriate. The point is being made to emphasize that there is a need to invest in appraising the mechanisms for change and related assumptions, leading to appropriate refinements in intervention strategies. The assessments of change mechanisms and assumptions need to be made using a broad systems perspective: at the farm, farming systems, livelihoods, value chains and sector levels. Presumably, the value chains work of the program will have a central role in investigating and validating the mechanisms and assumptions of the theory of change, whether this is strictly the work of the VCTS or all the flagships working together at the R4D sites.

Despite the above concerns, the contributions expected of the value chains work (identified in preceding section) and the new program and VCTS flagship theories of change do identify useful and relevant criteria for assessing research priorities and progress in developing value chains. Implicit in the theories of change are the following criteria for identifying and assessing value chain research and development priorities:

- Targeted to farmers and other value chain actors
- Assessment of integrated technical options

- Facilitation of value chain transformation
- Partnership building to support scaling
- Capacity development for partners and value chain actors
- Facilitation and engagement in multi-stakeholder platforms

The implicit criteria for assessing progress in developing value chain interventions are:

- Identifying interventions to improve value chain productivity and efficiency
- Developing capacities of partners and value chain actors
- Learning from value chain development processes
- Influencing policy and investment environments
- Developing productive partnerships to support scaling
- Enhancing prospects for impacts at scale

The above are not a sufficient set of criteria for priority setting and assessing progress but they are a reasonable starting point.

Impact Pathways

To assess similarities and differences in the country approaches, impact pathways were reviewed for six sites: Egypt, Ethiopia, Uganda, Tanzania, Vietnam, and Nicaragua. This review showed that there had been significant partner and stakeholder engagement in the development of the impact pathways. The impact pathways appear to build on insights generated through the situational analyses and value chain assessments. Based on the reports and discussions during site visits, the workshops organized to develop the impact pathways were useful mechanisms for developing and clarifying value chain intervention strategies.

It is less clear that the impact pathways, as thus far developed, are sufficient for assessing and communicating about intervention logic and program priorities – to partners, program managers or prospective donors. To illustrate this, information on expected outcomes, interventions and outputs extracted from the impact workshop program documents, is summarized in Annex M.

Between three and six pathways were identified in all countries – six in Egypt and Vietnam, four in Ethiopia, Tanzania and Nicaragua, and three in Uganda. To summarize the patterns found in the six countries:

- a) All six had one or more program outcomes primarily focused on access to inputs and services
- b) Three had one or more pathways with program outcomes that would directly increase productivity, while the other three had outcomes focused on building capacities that would enhance productivity
- c) Three countries had program outcomes specifically focused on “eco-friendly” production and waste management practices – Uganda, Vietnam and Nicaragua
- d) Four countries had program outcomes focused on institutional arrangements to improve value chain performance and coordination – Egypt, Vietnam, Nicaragua and Tanzania
- e) Three countries had program outcomes specifically focused on improved sector policies and strategies – Vietnam, Egypt, Tanzania
- f) Two countries had program outcomes that specifically addressed product quality and safety – Nicaragua and Uganda
- g) Two countries has program outcomes that specifically focused on supporting consumption of animal-source foods – Nicaragua and Tanzania

One very positive feature of the impact pathways for all countries is the emphasis given to institutional strengthening, and specifically to improved access to services. The specific attention given to policy level outcomes in half the countries is notable as well. Despite the longstanding focus and core competence of the partner centers for achieving impact through improved production systems, the teams in most countries have clearly understood and embraced the broader scope and systems perspective of a value chains

approach. The outcomes for only two countries – Ethiopia and Vietnam - primarily focused on improving production and productivity with correspondingly insufficient attention to interventions all along value chains and enabling policies and institutions – but even those countries had at least one impact pathway that is driven mainly by policy and/or institutional strengthening outcomes.

Beyond the above commonality, it is not clear why there was so much difference in the various country approaches. Clearly, this was in part due to country specific circumstances. For example, the program outcomes and pathways in Egypt were based on and correspond to the deliverables of the SDC project. The emphasis on product quality in Nicaragua no doubt reflects a relatively more mature stage of modern value chain development – not to mention the need to comply with modern retail and export standards. In general, however, there would appear to be some degree of serendipity in the patterns of outcomes and subsequent impact pathways, probably stemming more from the orientations and strengths of program staff in the countries than from sound analysis of alternative pathways and program outcomes, outputs and interventions necessary to drive those impact pathways. Whether this is the case or not, there clearly seems to be an opportunity and a need to compare and contrast approaches, and to seek improved harmonization where there is not clear need for distinct outcomes and pathways stemming from contextual specificities.

The impact pathway reports for four of the six countries identified assumptions. The pathways for all countries should have included explicit assumptions. For those countries that did identify assumptions, most of the assumptions appear to be reasonable. However, the assumptions are not specific to specific pathways, let alone for specific developmental outcomes. Plus, there did not appear to be on-going research directed at validating the assumptions. Such research is recommended good practice under CGIAR guidelines.

Moreover, there are tenuous implicit assumptions about the relationships between the program outcomes, outputs and interventions and the developmental outcomes – as was discussed above in the sub-section on “Theory of Change”. As with the program and flagship level theories of change, there is a need for more discussion, refinement and validation of alternate pathways and impact mechanisms. Where appropriate, there might well be a need to identify appropriate mitigating or supporting activities to achieve the desired developmental outcomes.

In terms of format and presentation, there is another difference among the countries. Three countries identified both interventions and outputs leading to program outcomes. Two other countries identified outputs but not interventions, while another identified activities and outputs but not outcomes. There would be an advantage for monitoring, assessment, reporting, lessons learning and scaling if there was greater harmonization – both substantively and in terms of presentation.

A final observation on the impact pathways is that none refer to or take advantage of the different requirements for achieving developmental outcomes through upgrading of specific types of value chains. The configuration of program outcomes, outputs and interventions needed to achieve developmental impacts for local market value chains in marginal market and environmental conditions are very different from what the program needs to do to achieve impact through interventions to support value chains development in more conducive market environments – particularly in cases where there is already reasonable producer supply capacities.

From the standpoint of sound value chains methodology, it would be more useful for planning, priority setting and monitoring progress to develop impact pathways (or at least upgrading strategies) for specific “generic” value chains. The rural to rural, rural to urban, and peri-urban to urban categories used during site selection could serve as a starting basis for identifying value chain upgrading strategies for these “generic” value chains, which in turn could serve as a basis for identifying essential program outcomes, outputs and interventions for each of those generic value chains in order to achieve desired developmental impacts for

the value chain actors participating in those types of value chains. This could be done as internal team reflection and planning exercises even if there is a need to maintain broader “sector level” impact pathways for program reporting and monitoring.

Key Points, Recommendations and Working Suggestions

Key Points

- The conceptualized role of the of value chains work in the context of a broader A4RD program is relevant and appropriate.
- The program and VCTS theories of change identify some criteria for assessing research priorities and progress in developing value chains but, for the most part, they are more relevant for higher level strategic planning than they are for research priority setting.
- The transmission mechanisms and priorities for the VCTS theory of change are not sufficiently clear and the assumptions require greater specification and critical appraisal.
- The R4D impact pathways, as thus far developed, are not sufficient for assessing and communicating about intervention logic and program priorities.

Recommendation

1. Review and further develop impact pathways, particularly assumptions about employment, consumption and environment outcomes. [PM, VCC]

Working Suggestion

- § It would be more useful for planning, priority setting and monitoring to develop impact pathways or at least upgrading strategies for specific “generic” value chains. [VCC]

2) How Appropriate were Sector and Country Selection?

A key element of the program design was inclusion of multiple countries and regions, with overlaps in focus species, to give a basis for comparison and cross-system learning. The choice of sector and country combinations has been a significant factor impacting the scope and effectiveness of the program’s value chains work. This section reviews the selection process and identifies implications for country-level development and application of the program value chains approach. The last part of the section points to opportunities for cross country learning and information exchange building on the combinations of sectors and countries selected.

Criteria for Choosing Countries

There were five standard criteria for choosing countries: (1) growth and market opportunities, (2) pro-poor potential, (3) researchable supply constraints, (4) enabling environment, and (5) existing momentum. Most value chain approaches give priority to market opportunities and enabling environments. “Existing momentum” and/or an analogous criterion such as “capacity to deliver” have also been commonly used criteria. Many if not most value chain projects also take into account the potential to build supply from smallholder producers, so this is as well a typical criterion. The only criterion that is atypical was “researchable supply constraints”. Even this, however, well reflects the role of the CGIAR. Overall, there would not appear to be any problem with the standard criteria for choosing countries.

Some questions do arise with respect to application of the criteria. In general, it seems that researchable supply constraints and existing capacity (de facto basis for assessing momentum on the specific sector) were given heavier consideration relative to market opportunities and enabling environments. While this was a pragmatic approach that made sense for the first set of countries, it did lead to choice of some countries that do not appear to be optimal from the standpoint of scaling and generalizability of lessons learned. For example, in Egypt, aquaculture production is restricted to specific areas with large blocks of medium and

large scale ponds. There is effectively no smallholder fish farming; so, it is not clear how lessons in developing services for aquaculture in Egypt will translate to other countries.

It is also not clear how “enabling environments” was interpreted since there was little market drive, at least in the sense of prospects for private sector investment and co-support for value chains development, and little drive from government policy in several of the countries. In Ethiopia, for example, the main priority of the government for small ruminants is to develop exports to the Middle East (although the government also gives priority to increasing supply to domestic markets). In Uganda, pigs are seen by the government as a minor sector, while sectors such as poultry and beef cattle are identified as priorities in government strategy and policy documents. The Agricultural Sector Development Strategy in Tanzania calls for priority attention to high potential regions such as the Southern Highlands, particularly for dairy sector development. It was hard to understand how the environments were enabling in the sites visited.

Another interesting and unusual aspect of the species *cum* country selection approach – at least for value chain development – was that no consideration was given to prospects for value addition – other than prospects for increasing value addition at the producer level. In Tanzania, Uganda, Egypt and Ethiopia, there is extremely little post-production value addition – most milk is consumed raw, most pigs are slaughtered and immediately eaten deep fried at pork joints, farmed fish are sold fresh or street grilled, and goats and sheep are sold as live animals even through to final stage buyers such as restaurants and hotels.²⁵

Comparison Opportunities

Even if the strategy for selecting value chains was largely pragmatic, the result was a diverse range of situations, with relatively more and relatively less developed sectors. These provide a good opportunity for comparative appraisal of value chain upgrading and transformation strategies. Key differences in the country selected are highlighted in the following text box.

Table 4: Important Country Comparison Opportunities

| | | |
|-----------------|------------|---|
| Pigs | Vietnam | important food, well developed services, driven by urban demand |
| | Uganda | marginal food, weak sector, not strong market drive, not government priority |
| Milk | Nicaragua | dual purpose both important, strong private sector, market driven, value added products (cheese) even more important than fresh – including cottage industry cheese |
| | India | Bihar is well developed with strong private sector services, processing, links to markets; Asam is low productivity, fragmented markets, not sufficient surplus production to attract private sector; still is quite a bit of informal sector processing – sweets |
| | Tanzania | very little processing, weak private sector involvement at least in moderate potential areas; government support services not strong; little market drive |
| Fish | Egypt | farmed fish not consumer preference but important street food; well performing and organized production sector but not much involving poorer farmers |
| | Bangladesh | spectrum of very small to large scale production; diverse and complex value chains; limited processing for domestic markets; rapid growth |
| Small ruminants | Ethiopia | one of the largest populations of small ruminants in sub-Saharan Africa, but also the lowest offtake among African countries; many producers living in isolated |

²⁵ Although it is unusual for value chain development programs to target value chains in which there is little value addition, it is quite common that there is no or minimal post-production value addition in small ruminant, aquaculture and pig value chains in developing regions. The challenge of developing such value chains is one of the main reasons that there is a need for value chains R4D. (NB: clarification provided during review of first draft).

| | | |
|--|--------------|--|
| | | areas with limited access to services and markets; some options for milk, export and leather industries but primary focus on meat for domestic markets |
| | Burkina Faso | important in domestic meat and milk consumption, particularly in rural areas, but also important supplier for coastal African countries; distinct agro-ecology compared to Ethiopia; skins, milk and meat value addition opportunities to build on |

A top priority for the program looking forward will be to strengthen comparative frameworks and learning mechanisms to take advantage of the above and other comparison opportunities.

Key Points and Working Suggestion

Key Points

- The standard criteria for choosing countries were appropriate but application of the criteria was not convincing.
- Some countries do not appear to be optimal from the standpoint of value chain upgrading and scaling.
- The strict combination of sectors and countries is limiting the ability of the program to generate international public goods.

Working Suggestion

- § Develop a strategy for transitioning within three to four years from one sector per country in nine countries to a more flexible approach that would include provision of support in other countries and work on multiple species in countries where have built up capacity. [PMs]

8.2. Program Management

3) How effective and efficient has been VCD coordination and oversight?

This question was addressed by assessing several program coordination and oversight issues, including planning and review processes, methodology harmonization, cross-site technical support, information exchange and collaboration with other CRPs. It is important to acknowledge that most of the cross-site coordination and support was provided by scientists working in technical flagships and not by the program management unit per se.

Planning and Review Processes

The main issues assessed with respect to planning and reporting processes and requirements were the influence they might have had on the value chains R4D work of the program, and whether the processes were perceived as helpful or unnecessarily burdensome.

The program has a standard format for work planning that for 2014 required all activities to be linked to theme objectives, outcomes, outputs and milestones. Value chain teams – as well as scientists in other themes – were asked to identify specific deliverables for the year. The consolidated work planning format appears to be a good tool reminding staff of the need to focus on broader program objectives and outcomes.

To further support planning and improved coherence, review and planning workshops have been convened each year involving scientists from different sites and themes. Workshop reports have been compiled and posted to the program wiki in a timely manner, in most cases, ensuring that results are readily available to all staff and other interested stakeholders.

Cross-site planning meetings specifically focused on the value chains approach and work of the program, included:

- Value Chain Transformation flagship team meeting, Nairobi, 8-9 July 2014
- Livestock and Fish Value Chain Coordinators' meeting, Nairobi, 3 September 2013
- Value Chain Development Team Meeting and Tools Workshop, 5-8 March 2012, Nairobi
- Value Chain Workshop, August 2012, Penang (organized by WorldFish)
- Value Chain Component Planning Meeting, Kenya, 6-7 December 2012

The program management unit has also provided detailed guidance for annual reports, calling for consolidated information for all themes. The structure of these reports and the information requested required reflection on the scope of work, multi-disciplinarity, and the need to focus on achievements and progress rather than activities and inputs. It was useful to include in the report format a summary section on key messages, including highlights on a limited number of significant achievements or success stories. The reporting format asked for gender disaggregation when possible. Specific information was requested on benchmarking, gender research achievements, partnership building achievements, capacity building, progress along impact pathways, and progress towards achievement of research outcomes, IDOs and impacts. The report guidelines also asked for identification of lessons learned.

The program management message to be outputs and impact oriented was further reinforced by a standard set of program indicators that are updated each year. These included the following indicators on progress on innovation and value chain upgrading:

- Short term training
- Technologies released by partners
- Improved technologies on ground
- Policies, regulations, administrative procedures

The above planning and reporting processes undoubtedly have contributed to the development and improved performance of the program's value chains approach.

In the light of the highly specified planning and reporting processes, it had been expected that staff would feel that program planning and reporting requirements created too much of a burden. To a certain extent, this was found in the site visits and surveys but not nearly to the extent anticipated. In fact, there seemed to be a general sense that the substance of planning and reporting was not a major problem for anyone. Some people specifically mentioned that the templates were helpful. The most common complaint mentioned was that there had been stability issues linked to the change from components to themes to flagships, including the associated frequent changes in terminology.²⁶ The other complaint often heard was that too much time had been spent on planning, cutting into time that could have been spent doing core work. Two very interesting points raised were: (a) the trade-offs between "creative individualism" versus structured, systematic approaches, and (b) flexibility to report on qualitative changes.

Perhaps part of the reason that there was not more push-back than was reported was a view expressed by many that the substance of plans were developed from the bottom-up. Value chain teams, including cross-site members, were encouraged to develop strategies and work plans together. It is also likely that the value chain coordinators at each site absorbed most of the transaction costs of planning and reporting as the interface between program management and the value chain teams.

Overall, the planning and reporting processes appear to have been constructive and useful with respect to facilitating development of value chains and outcome-oriented perspectives. They probably also contributed

²⁶ Many of the changes in various planning and reporting processes, and related terminology changes, were due to changes at the consortium level.

to the process of methods harmonization, discussed in the following sub-section. Still, it should also be noted that the “need to have flexible and dynamic planning processes” was one of the recommendations emerging from a wrap up workshop world café for recommendations development. Flexibility and agility in planning are issues that must be kept in mind at both the program and R4D site levels.

Methodology Harmonization

The program proposal indicated that the program would operate as a methodological platform for adapting the value chain framework to the challenge of pro-poor value chain development for animal-source foods and enterprises that have, in most cases, been traditionally the responsibility of women.

The cross-site support provided to introduce and support harmonized tools and methods has been the single most important factor leading to a discernable, cross site value chain R4D approach. The program itself includes situational analysis, scoping, value chain assessment, gender transformative tools and benchmarking as key elements of the toolkit.²⁷ Scoping appears to have been an informal process with substantial variation across countries. Benchmarking is still in early stages of development. Much work remains to do in coming up with a validated and harmonized approach for benchmarking. While not mentioned in Katiuongua et al (2013), there have also been concerted efforts to develop and promote harmonized approaches for site selection and development of impact pathways.

The text box below shows where the various elements of the harmonized toolkit have been applied.

Table 5: Methodology Harmonization

| | Country Selection | Situational Analysis | Site Selection | Value Chain Assessment | Impact Pathways | Gender Tools | Benchmarking |
|---------------------|-------------------|----------------------|----------------|------------------------|-----------------|--------------|--------------|
| Bangladesh | | X | X | | | | |
| Burkina Faso | | | | | | | |
| Egypt ²⁸ | X | X | | X | X | | |
| Ethiopia | X | X | X | X | X | X | X |
| India | X | X | X | X | X | | |
| Nicaragua | X | X | X | X | X | X | |
| Tanzania | X | X | X | X | X | | |
| Uganda | X | X | X | X | X | | |
| Vietnam | X | X | | X | | | |

There had not been complete harmonization, mainly attributable to differences in timing, country circumstances and availability of resources. Indeed, the need for adaptation to specific contexts is recognized and encouraged. Nevertheless there has been significant harmonization, particularly for the situational analyses and site selection.

In addition to the above, support was provided for strengthening gender components of VC assessment tools in Tanzania. Additional support for increasing gender capacity in the VC sites was provided in Egypt and

²⁷ Introducing the Livestock and Fish research program value chain assessment toolkit. 2013. Epi Katjiuongua, Derek Baker, Froukje Kruijsen, Kate Longley, Isabelle Baltenweck, Emily Ouma, Jane Poole, Samuel Mbugua, Edna Mutua, Kathy Colverson, Michael Kidoido, Carlos Quiros, Emily Kerandi, Paula Kantor, Alessandra Galie. Livestock and Fish Gender Working Group Workshop and Planning Meeting Addis Ababa, Ethiopia, 14-18 October 2013

²⁸ A variety of studies contributed to the situational analysis and value chain assessment in Egypt, including a prior situation analysis as part of a national aquaculture development strategy (2008); a value chain analysis of Egyptian aquaculture (2011); a market study on farmed fish (2012); a feed value chain analysis (2014); and most recently (2014) a situational analysis (small and medium scale aquaculture value chain development) - clearly designed to be consistent with situational analyses developed at other sites.

Uganda. Support was provided for reviews and workshops on best bet interventions in several countries, including Vietnam and Uganda.

During the site visits, there was a somewhat different reaction to the support provided depending on site. In Egypt, for example, the point was made that they had not drawn very much on the program toolkit in part because the main value chain analysis there was carried out before the program was launched, but mainly because value chain activities in Egypt are supported through a SDC bilateral project that has its own deliverables.²⁹ The suggestion was made that the program can and should develop a toolkit but not seek to have a harmonized approach across sites and contexts. In the other sites visited, the staff acknowledged that there had been a bit of tension with what was seen as “central push” but they were not uncomfortable with this. More commonly, the view was expressed that there was a lot of participation in the development and adaptation of the tools. At least some scientists and stakeholders were very positive, noting that common tools have helped to give a sense of being part of a larger program.

The biggest benefit of support for methodology harmonization has indeed been the development of an identifiable toolkit that can be communicated and “sold” to prospective donors and development partners. Commonality of methods across sites also helps with comparative analysis. The availability of a toolkit, ready to adapt, can also improve efficiency and reduce costs. There is a lot to be said for continuing program level support for methods harmonization.

There are, however, at least three important risks to keep in mind as well. One is the risk of letting a secondary objective (i.e. application of a harmonized toolkit) take priority over higher priority objectives, such as timely actions to support assessment of value chain innovations. A second is the risk faced in Egypt and other sites of conflicts with bilateral project deliverables. A third is the risk that the methods being promoted might end up being more complicated and more costly than might have been the case if harmonization had emerged as a result of success case replication following value chain team innovation in response to felt needs in their specific contexts.

Flexibility for building tools and best practice guidelines from the bottom up and through cross-site lessons learning workshops could be even more important as the program moves more actively into introduction and assessment of technological and institutional innovations. To illustrate, one type of multi-stakeholder platform does not fit all circumstances, nor does any single approach to on-farm forage trials, or one approach to developing hubs, or one way to mobilize financing for value chain investments. This is a major reason why research cannot stop once diagnosis has largely been completed and the balance of effort shifts to support for innovation and upgrading.

Technical Support

The program proposal stated that the value chain R4D teams for each site would consist of a mix of technical and social scientists, some focused on the specific value chain and some who would work across value chains. This appears to be working quite well at least for the ILRI led and backstopped sites in Uganda and Tanzania. Program staff at these sites and at ILRI Nairobi expressed solidarity as a team. The cross-site team members were able to bring expertise that the program could not have afforded to address through fulltime staff, and also helped with cross site information exchange. Some of the cross-site staff had animal science expertise lacking at the R4D site level. These staff helped with planning and provided advisory support to national research and development partners. Other cross-site staff played methodological support functions, as discussed above. This was most evident in the support provided for targeting and site selection, impact pathways development, and gendered value chain analysis. It can be expected to be the case for benchmarking.

²⁹ It must be noted that following the approval of Livestock and Fish, deliverables of the SDC project in Egypt were adjusted to bring more in line with the program strategy and approach.

During the site visits, a couple of priorities were mentioned more than once for future technical support. These included support for epidemiological appraisals and for business development.³⁰

It was not possible to ascertain how important program level flagship technical support was in the sites led by ICARDA, CIAT and WorldFish. In Egypt, the technology work was being handled by Egypt-based WorldFish staff and the development work had been out-sourced to Care. In Ethiopia, there are enough ICARDA and ILRI scientists based at the ILRI campus to cover most of their needs themselves. This is not to say that technical support was not being provided to those sites. There had been support, for example, for gender assessment and for capacity development. Relatively speaking though, there did appear to be quite some differences in the levels and nature of technical support being provided to different sites visited, and this presumably is the case at other sites (if for no other reasons than travel distance and/or language requirements). If this hypothesis is correct, then it suggests that other mechanisms are needed to support cross-site information exchange on methods and intervention strategies.

Information Exchange

The program proposal recognized that the value chain teams would be geographically dispersed. It was indicated that the program would ensure that the VC teams would be able to collaborate and ‘do science’ virtually across organizational, geographic and time boundaries. The main mechanisms used thus far for facilitating knowledge sharing and communication across sites have been workshops and the program wiki. These have been effective, although some feedback was received during the site visits that there is now a bit of “workshop fatigue”.

It does not appear that the program wiki has been an effective tool for supporting a community of practice on value chain lessons and good practice. The wiki establishes the capacity for such a community of practice but seems to be used mainly as a tool for information dissemination. This is an issue for CRP appraisal but the failure to activate an effective community of practice has impacted on development of an applied and validated value chain R4D methodology for the selected animal source food value chains.

During the site visits and in the staff survey, the view was repeatedly expressed that there should be more cross-site learning and information exchange. Some staff went as far as to say that there had been no systematic sharing of lessons from other countries or with other organizations working on the same sectors in nearby countries. Essentially every time the issue was raised during the site visits, staff, partners and stakeholders said that failure to share information and lessons between countries was a lost opportunity.

Cross Site Comparison and Learning
Only 14% of staff agreed that there had been effective cross-site comparison and learning. Concerns were also expressed about the transactions costs incurred and about the timely availability of financial and human resources.

Staff members were asked in the staff survey to propose ideas for strengthening cross-site information exchange. Nearly half of the respondents said that there should be more exchange visits, while several others recommended that more, even most, staff should work across sites. Suggestions for program management included the need to support increased information sharing, organize technical meetings, and invest more time and resources in cross-site learning.

³⁰ Business development support includes advice and assistance related to product development, quality and safety, branding, target markets and consumers, procurement practices, operational efficiency, logistics, financial management, upgrading strategies, etc.

Collaboration with Other CRPs

During the site visits, the staff consistently said that there was good collaboration with other CRPs. According to the staff survey, the view expressed at the R4D site level is shared by most of the staff. A list of collaboration extracted from the annual reports of R4D, shown in the table below, confirms that there are working relations with other CRPs in all of the active R4D sites. (Burkina Faso still is just getting started.)

Table 6: R4D Site Collaboration with Other CRPs

| | |
|------------|---|
| Bangladesh | Aquatic Agricultural Systems; Agriculture for Nutrition and Health; Climate Change |
| Egypt | Agriculture for Nutrition and Health; Water, Land and Ecosystems |
| Ethiopia | Agriculture for Nutrition and Health; Drylands System |
| India | Agriculture for Nutrition and Health |
| Nicaragua | Humid Tropics; Policies, Institutions and Markets |
| Tanzania | Agriculture for Nutrition and Health |
| Uganda | Agriculture for Nutrition and Health; Policies, Institutions, Markets; Root, Tubers and Bananas; Humidtropics |
| Vietnam | Humidtropics; Policies, Institutions, Markets |

There is particularly active collaboration with the research program on Agriculture for Nutrition and Health (A4NH). A4NH has a strong alignment with the Livestock and Fish program because of food safety issues. A4NH developed a framework to design and conduct integrated assessments of food safety and nutrition that were applied in several of the program's target value chains. It also contributed to or led major assessments in five value chains. The value chain teams in both Tanzania and Uganda are working closely with the Safe Food-Fair Food project, which is under the A4NH. In Vietnam, program value chain activities are partially supported by the Pig Risk project, which is primarily affiliated with the A4NH. The team in Ethiopia is also working with the A4NH.

The other CRPs the value chain teams are most actively collaborating with are Policies, Institutions and Markets and Humidtropics. In 2013, program value chain scientists co-organized with PIM a conference to review value chain tools. Some of the Livestock and Fish value chain scientists participate in a group of CGIAR value chain specialists organized under PIM. Humidtropics is the most active CRP collaborator for the team in Nicaragua.

The only sites where it was possible to directly observe collaboration with other CRPs was in Uganda and Tanzania. In both places, there were close working relations, even to the extent that the scientists working in the other CRPs almost seemed to be value chain team members. In Ethiopia, the lead scientist from A4NH participated in the wrap-up workshop and pointed out that there had been active collaboration between A4NH and Livestock and Fish in Ethiopia as well. Otherwise, it was not possible to assess the quality and benefits of collaboration between the program's value chain teams and other CRPs.

Key Points, Recommendations and Working Suggestions

Key Points

- Value chain coordination and had substantively and positively impacted on development and implementation of the program's value chains approach.
- Planning and reporting processes contributed to stimulating creative thinking and helped increase awareness of the need to focus on broader program objectives and outcomes.
- There is now an identifiable toolkit that should be of interest to prospective donors and development partners.
- While there clearly have been benefits from methodology harmonization, there should be flexibility for building tools and best practice guidelines from the bottom up and through cross-site lessons-learning.

- There is a need to identify complementary mechanisms to support cross-site learning and information exchange.

Recommendations

1. Establish in-house business development competency at the program management level to support mainstreaming of business perspective and reinforce capacity for research on value chain business models. [PM]
2. Identify and put more resources into mechanisms to support cross-site learning and information exchange. [PM]
3. Ensure there are systematic frameworks for comparative analysis, innovations assessment and lessons learning – within sites, across sites within countries and across countries. [PM, VCC]

Working Suggestions

- § Flexibility and agility in planning are issues that must be kept in mind at both the program and R4D site levels. [PM, VCC]
- § Ensure that the value chain teams build information exchange and learning linkages with other value chain programs in the same and nearby countries. [PM, VCC]

4) Have financial and human resources been sufficient?

Based on observations and feedback during the site visits, both human and financial resources management have posed enormous challenges to development and implementation of the program's value chains approach. To be clear and fair, most of the challenges do not relate to specific features of the Livestock and Fish program, and are not factors that can easily be addressed by the program management unit. Most of the challenges stem from adjustments to CRP modality and from the necessity to rely on a mixture of core and bilateral funding. At least some of the challenges, however, stem from adjustments needed for CGIAR centers to be effective in value chains R4D.

Human Resources

The likelihood of success in value chains work is greater when there is a core team of fulltime, experienced practitioners who have diverse, complementary skills; and who have a strong understanding of sector and business development. This was not the case at any of the sites visited. There were no long-term, experienced value chain specialists.³¹ Most of the team members were CGIAR scientists, having to reinvent themselves as value chain specialists. In cases where new staff had been recruited, the senior scientists were in leader roles and had limited amounts of time for technical work. Most of the other – often excellent and enthusiast – scientists and technical specialists were relatively junior in their careers. There was no indication in program documents that there had been systematic capacity development in team building or the body of knowledge on value chain lessons and best practices.

By far, the more important challenge was the insufficiency of fulltime experienced staff, not staff competencies. With respect to competency for value chains work, there clearly had been a lot of “learning by doing”, which is how most value chain specialists got their start anyway. The people working at the sites were dedicated, well trained and very capable in their own disciplines. Overtime, they appear to have developed a good understanding of the goals, principles and methods of value chains development. Their perspectives and approaches were a bit too conditioned by the program toolkit and specific contexts and projects in which they were working. But, this could be said of most value chains teams over the past decade. Given time, both day-to-day and longer in the value chains work, the staff on the teams visited appeared to have the capacity to develop strong competencies in value chains R4D.

³¹ However, Worldfish was at the time of the evaluation recruiting social scientists with value chain experience in Bangladesh.

Time sufficiency and competing demands on time is, however, is a challenge that needs attention. It would be better, if feasible, to have more fulltime staff with permanent country level presence. The multi-site scientists seemed to be committed to the sites they supported, many even considering themselves to be part of the value chain teams in those sites, but most had small time allocations to each site and also had time allocations to work on other deliverables under their own flagships. This was not a challenge facing only the multi-site staff. Country based staff often had time allocations to multiple flagships, CRPs and even time shares for bilateral projects and core program funds. Even some of the value chain coordinators did not have fulltime allocations to handle their difficult and critically important roles. In many cases, the coordinators were faced with building coherent programs of work integrating scientists that had only 10-20 percent of their time for the site's value chains work. The value chain coordinators from one center did not have a formal say in the time allocations for scientists from the other centers.

The human resources challenges were less in the sites that had bilateral project funding but even those sites faced difficulties. Bilateral funding made it possible to develop a value chains team in Uganda but this was a relatively recent development. For most of the time, the team in Uganda was very much understaffed and highly dependent on interns and multi-site technical support. Bilateral funding in Tanzania and Egypt had helped tremendously with operations but both sites lack "single-location" teams. The value chain coordinators are based in Dar es Salaam and Cairo in order to maintain working relations with partners and key stakeholders while other team members, some only part time and some partners with no program funding, carry out the fieldwork. The bilateral funding in these three sites had not been sufficient to build up teams with the range of specialists needed to address the full scope of value chains work.

The team in Ethiopia had more staff-time equivalents than did the other sites visited – even though the latter had benefited to a greater extent from bilateral – but each scientist, including the value chain coordinator, had multiple time commitments. Five staff had more than 40 percent of staff time for the small ruminant value chains work but several other staff had quite small time allocations. The challenge in Ethiopia therefore was somewhat different – i.e. how to coordinate and integrate many scientists working with different assignments.

A human resources challenge facing the program scientists and therefore program management are the incentive and supervision systems for working on value chains R4D and adaptive research more generally. When the staff was asked how they might maintain their value as scientists when working in value chains and adaptive research, many confirmed that this would be very difficult. Many said that regardless of working on value chains R4D, scientists had to continue to ensure scientific rigor and publish. Some indicated that there is a need for periodic technical conferences as a venue for presenting results from adaptive research and value chains R4D. Others said that scientists working on value chains R4D and adaptive research need to focus on creating outcomes and being innovative in addressing new issues. The latter would appear to be appropriate criteria for program management and the partner institutes to use when assessing scientists working actively at the value chain sites.

The human resources challenges faced by the coordinators and scientists working on value chains could be attenuated at least to a degree through adjustments in staff evaluation procedures and clarification of accountability and reporting lines of command for scientists with multiple assignments. This is an issue for the IEE and even the CGIAR consortium but it is nevertheless important to emphasize that adjustments are needed in order to mitigate the impacts human resources management has been having on the program's value chains work.

Financial resources

In most sites, not just the sites visited, one or two bilateral projects had been providing much of the impetus and significant funding support for the program's value chain activities. In the sites visited, the availability of

financial resources through bilateral projects greatly accelerated progress but implementation approaches were also affected. In Uganda and Tanzania, bilateral funding was mobilized after the program started and the scope of support was well aligned with the program's value chains approach. In Egypt, SDC funding has been instrumental in the progress made on all deliverables. However, as mentioned above, the value chain approach in Egypt has been somewhat different than in other sites because the program had focused on deliverables of the bilateral project. The review of program documents for the sites not visited indicates that bilateral funding is perhaps the most significant factor impacting on the pace and pattern of implementation in those sites.

It is worth noting that several bilateral projects supporting Livestock and Fish activities are also contributing to other CRPs. In some cases, such as the Pig Risk project in Vietnam, the main affiliation was with another CRP. In yet other cases, funding had been mobilized for program related activities from bilateral projects that do not even have a structural, on-going affiliation with the program. Rather, co-funding had been mobilized on an opportunistic basis when there has been a commonality of interests.

The timing of bilateral project funding also had a major impact at several sites. For example, the 2013 report for Nicaragua indicated that delays in the start of bilateral funding impeded progress on planned deliverables. The programs in Uganda and Egypt are facing risks for 2015 since there will be gaps in funding from IrishAid and SDC even though both donor agencies are satisfied or even enthusiastic about performance of the program. It has to be expected when relying on donor funding that delays and gaps will take place as a result of donor planning cycles and fiscal years.

The impact of insufficient funding, from both bilateral and core resources, was one of the issues most often highlighted in the participatory SWOT and world café for recommendations development (WCRD) during the wrap up workshops in the sites visited. In Ethiopia, both WCRD groups identified the need for resources mobilization to fill competency gaps. A related WCRD recommendation was to enhance program capacity for fund raising. The need to enhance program capacity for fund raising was also a recommendation coming from the WCRD in Tanzania. In Uganda, lack of continuity of funding and dependency on donor funding were identified as weaknesses in the SWOT analysis. In the Uganda WCRD, intermittent funding and lack of funds for program partners were identified as important limitations on the program's value chains work.

One clear finding coming out of the evaluation is that bilateral funds need to be mobilized to close the gap between program needs and the program core resources. A related finding is that there should be more capacity for resources mobilization at the program management level. Based on interviews with ILRI management, resources mobilization should not though be viewed as a lead center responsibility. Each of the partner centers already is facing enormous challenges in mobilizing sufficient resources for programs, scientists and infrastructure other than Livestock and Fish. In the end, as recommended by staff and stakeholders in the WCRDs, the program needs to find a way to mobilize more resources for the value chains work of the program.

Key Points, Recommendations and Working Suggestions

Key Points

- The teams are understaffed and underfunded.
- The main human resources challenge was insufficiency of full time experienced staff.
- Bilateral funding had a major impact on the pace and pattern of implementation in sites that had made the greatest progress.
- Implementation approaches were significantly affected by the need to focus on project deliverables.
- Bilateral funds need to be mobilized to close the gap between program needs and program core resources.

Recommendations

4. Reinforce capacity for resources mobilization at the program management level so the burden for resources mobilization does not fall so heavily on the value chains teams. [PM]
5. Establish a common pool of resources at program level for flexible response to unplanned needs, cross site visits, and regional and sub-regional technical meetings. [PM]

Working Suggestions

- § Establish a core teams of fulltime, experienced practitioners with appropriately diverse, complementary skills [PM, VCC]
- § Clarify incentive and supervision systems for the staff working on value chains teams. [PM]

8.2. R4D Implementation

This section covers the most important findings since R4D implementation is for all intents and purposes synonymous with the value chains work of the program. The evaluation questions addressed in this section are:

- How appropriate have been the VC research agendas?
- How strong are synergies between VCD and other thematic research?
- To what extent has there been sufficient and effective multi-disciplinarity?
- How appropriate and effective has been partnership and stakeholder engagement?

5) How appropriate have been the VC research agendas?

This question is central to the overall evaluation of the Livestock and Fish value chains R4D program. Findings are presented on quite a number of specific research agenda issues under four sub-sections:

- Characterization, Priority Setting and Strategy Development
- Follow-up Research Agendas
- Methods for Assessing Innovations
- Comparative Advantage

Characterization, Priority Setting and Strategy Development

The main tools for characterization, priority setting and strategy development included situational analyses, site selection and value chain assessments. Results from all of the above clarified the contexts and organization of the selected animal-source food value chains, and were used to inform partner and stakeholder dialogue on priorities and best-bet interventions.

Situational Analysis

As stated in the program guidelines, the “main objective of the situational analysis is to assess the conditions within which the target value chains in the selected countries operate.” In practice, the situation analysis served to characterize and assess the target sector in each country.

A standard outline was developed and used in most countries. The main topics covered were:

- Products
- Consumption and expenditures
- Production systems and factors that influence production
- Imports and exports
- Input and services with specific coverage of services related to livestock or fish health, genetics and feeds services; plus knowledge systems (extension) and credit

- Value addition and marketing
- Food safety
- Competitiveness based on the structure of costs, prices and margins
- VC governance, mainly the degree of coordination
- Externalities
- Sector development strategies and activities
- Research and development partnership landscape
- Opportunities for pro-poor value chain development

Most of the country reports followed the outline in detail. Data and information were collected from both secondary sources and through interviews and focus group discussions conducted with value chain actors, public officials, development specialists and other stakeholders.

Despite the standard outline and similarity of implementation approach used, there is substantial divergence in what is actually covered in the reports. For example, the report for Bangladesh covers problems related to animal health, genetics and feed but does not address services. Under value addition and marketing, the problems of producers are highlighted but the issue of value addition is written off because “Bengalis prefer to purchase whole, unprocessed fish”. The report also does not provide information about different specific chains. It does though give excellent, disproportionate coverage on gender roles and issues.

Despite some divergence between what was expected and what was produced in the reports, the quality and comprehensiveness of the reports appear to be very good. They provide an excellent snapshot of the sector and context for value chains development in each country. The main limitation with respect to contribution to priority setting is that the reports are more descriptive than they are analytical, and point to many broad and often well-known constraints. None takes full advantage of the comprehensive sector overview compiled to point to a specific, limited number of the most promising opportunities to address in subsequent value chains R4D.

Site Selection

A program-wide site selection process was developed and used to identify specific areas or administrative units for value chain characterization and assessment of technological and institutional innovations. As indicated above there was a substantial degree of harmonization across sites. Under the harmonized guidelines, site selection started with geographical targeting using GIS. The main spatial criteria included: poverty rates, population density for the target species, and market access.³² In most countries, the GIS data were used to stratify prospective sites into “rural to urban” or “rural to rural domains” – or a variant of these domains such as “peri-urban to urban”. A consultative workshop was then organized with prospective partners and stakeholders from research and development organizations with interests related to the target sector. During the workshop, results were discussed and validated. Working group discussions were held to identify and agree on additional “soft criteria”. The soft criteria were then used during scoping missions in order to choose among the list of prospective sites retained after the consultative workshop.

This standard approach was used, with small variations, in Ethiopia, Uganda, Burkina Faso, India, Nicaragua and Vietnam. Ethiopia was a bit different in that it added “killer criteria”, i.e. conditions that had to be in place. Ethiopia also stratified and set target numbers of sites based on specific small ruminant species and lowland versus highland sites. India was also a bit different in that a two-stage approach was used: first selecting target states before moving on to site selection within states. Different approaches were used in

³² The proxy for market access was in most cases the estimated time to a town or urban center with, in most cases, 50,000 people. The cut off times for distinguishing areas with better market access ranged from a low of two hours for milk in Nicaragua to eight hours for small ruminants in Ethiopia.

Bangladesh and Tanzania, although the main criteria used for site selection were very similar. The main difference in Bangladesh was a first stage decision to work with producers in the southwest, a poorer than average region where aquaculture is very important and WorldFish already had an active program.

While soft criteria were the outcome of stakeholder consultations, in practice they followed closely the recommended start up criteria provided by workshop facilitators. This can be seen in the table below, which summarizes the soft criteria used for site selection.

Table 7: Summary of Soft Criteria for Site Selection

| Ethiopia | Uganda | Burkina Faso | India | Nicaragua | Vietnam | Bangladesh |
|---|---|------------------------------|---------------------------------------|---|---------------------------------|------------------------------|
| Research and development projects | Complementary projects | Ongoing research activities | Existing project & partner engagement | Other projects | Synergies other projects | WorldFish and other projects |
| Research and extension system supportive | [Research and extension involved and so de facto] | Presence of capable partners | | Institutional partners & capacity of partners | Institutional partners | |
| Donor interest | [Already had donor funding] | Available resources | Donor interest | Donor interest | | USAID active |
| Regional representation; lowlands and highlands | Not west – limited special coverage | | Chose states first | | Variation (markets, production) | Chose southwest |
| Likelihood of success | | | | Potential for impact | Dynamism | |
| Government interest | | | | | Government priority | Government priority area |
| | Access to input service providers | | | | | Access to hatcheries |
| Ease of implementation | Year around access | | | | | |
| Breeds with high market potential | | | | | | |
| | High disease burden | | | | | |

In all or nearly all sites, the soft criteria included: (1) on-going complementary projects, (2) capable institutional partners, and (3) resources available or prospects because of donor interest. These are pragmatic but do not support scaling or the need for comparative frameworks. However, variation – an implicit basis for comparative analysis - was addressed in most countries. In Ethiopia and Vietnam, there was explicit attention in soft criteria to ensuring variation; for Ethiopia, this was largely geographic, while for Vietnam it was based on diversity in markets and production systems. Attention to variation was in practice also taken into account in other countries through the delineation of rural-urban, rural-rural and urban-urban domains. The next levels of soft criteria most frequently used were: dynamism or likelihood of success and government priority. Both of these are important and would have been important to consider in all sites. Ease of implementation was used in two countries.

Overall, the approach to site selection appears to have worked well. The approach allowed a pragmatic combination of evidenced based decision making and stakeholder consensus building. There was sufficient objectivity to explain, justify and communicate about eventual site selection, while also enough flexibility to take into account expert knowledge and opinion.

From methodological standpoint, the main limitation of the site selection approach is that it is not clear from the various site selection workshops and reports how various spatial and soft criteria were weighted. Consequently, the results are not replicable and to an extent lack transparency. In practice, it appears that site selection among the “medium list” of prospective sites was primarily driven by partner and stakeholder interests and on-the-ground capacity to get started. These types of pragmatic considerations are not ideal from a methodological standpoint but are quite common in value chains work. The program went much farther than most value chain development projects and programs in its efforts to be objective and scientific in its approach. There clearly are strengths to the site selection approach that the program has to offer to other practitioners.

Value Chain Assessments

The value chain assessments are one of the most distinguishing features of the program’s value chains R4D approach. The assessments are in some senses one of the greatest strengths of the approach, and in other senses one of its main weaknesses.

On the positive site, the value chain assessments were comprehensive and provided relevant information on production practices, market channels and major constraints. The program has a standard “toolkit” for the value chain assessments with specific modules for producers, consumers, processors and retailers, and traders. There are also modules for village mapping, value chain mapping and a producers’ data sheet. While the information collected in most countries more or less covered these topics, the scope and approach was in practice somewhat different in each country, particularly in the earlier starting countries. The modules used in each country are briefly summarized in the table below.

Table 8: Value Chain Assessment Modules

| | |
|-----------|--|
| Ethiopia | Producer module covering production, inputs, services, marketing, institutions and regulations, and credit plus checklists for credit providers, experts, feed suppliers, traders, transporters and veterinary service providers |
| Uganda | Checklists for producers, traders, retailers, village veterinarians, “agrovet” stockists, feed traders, pig traders |
| Tanzania | Single guide for focus groups with producers and informant interviews with input and service providers and milk vendors and traders |
| Nicaragua | Single guide for focus group value chain assessment plus specific guides for women and producers |
| India | Producer focus group guide and data sheet covering the standard topics; plus a questionnaire for retailers and processors |
| Vietnam | Focus group guides or questionnaires for pig producers, village boar breeders, input stockists, village veterinarians, pig traders, feed traders, pig or pork retailers |

Identification of Priorities for New Technologies
A clear majority of the staff and an even larger percentage of the stakeholders agreed that the value chain approach has helped to identify and prioritize demand for new technologies.

Another positive feature of the value chain assessments was the extent to which they were participatory, directly engaging value chain actors in the assessment process. Information was collected through a pragmatic combination of informant interviews and focus group discussions. At the village level, the focus group discussions were organized in both series and parallel, often over a two day period. The approach seemed to be well thought through and was efficient for covering so much information in such a short time period.

The reports themselves were generally of very good quality. In some cases, such as Ethiopia, a participatory approach was used even for preparing the reports through writer-workshops. In all countries, the report results were shared and discussed with program partners and stakeholders, and used as a basis for identifying priorities and best bet interventions.

Despite many positive features of the value chain assessments, there were some notable limitations to the approach as well. By far the most important was the length and complexity of the modules. In Ethiopia, the producer guide alone was 15 pages, the trader guide was 8 pages and each of the other guides ranged from 2-4 pages. The India producer guide was 24 pages. The Tanzania guide was 13 pages. The total pages for guides and data in the other countries were more or less comparable. The length of the guides alone created a tremendous demand on the participants in the focus group discussions and interviews and inevitably led to long delays before reports were produced; certainly not the “timely feedback” mentioned as the goal in program documents.

The guidelines had other limitations besides length. While most were intended as guides for focus group discussions, they were mainly structured open ended questions that called for specific data and information, rather than focus group discussion guides. Some of the questions and mapping exercises appeared to be quite complex, and some called for information that cannot be reliably obtained through single-visit recall – particularly in group settings. Much of the information was descriptive without apparent use for priority setting.

Despite the commendable coverage of traders, processors, and input suppliers, all the assessments gave disproportionate coverage to characterization of production systems and investigation into problems faced by producers. There was relatively little or no coverage of logistical and transport systems, wholesale and regional markets, medium and larger scale processors, or of the modern retail and food service sectors. In most countries, there was little or no attention given to exporters or export oriented value chains even in countries where exports development is viewed as a priority. There was essentially no effort to elicit information and views on value chain dynamics or expectations on future developments.

Views and Needs of Beneficiaries
Most staff and stakeholders agreed that appropriate attention had been given to the view and needs of the value chain actors, and that use of the value chain approach had increase relevance of the research agenda for pro-poor upgrading.

Overall, the strengths clearly outweigh the limitations with the singular exception that the length, complexity and descriptive nature of the assessments reduced their value for timely and effective priority setting. The reports highlighted key characteristics and constraints of local farming and marketing systems but most of this information was not new to the participants in the follow up workshops. It is not clear as a result that the investments made in the assessments ended up having significant impact on the eventual selection of priorities for innovations assessment work, as was noted even in the staff survey. To the extent that they did, there would have been other more streamlined approaches if the one and only purpose was to support priority setting. This does not appear to be the case, however, and should not be. The assessments are sufficiently detailed that they provide a useful baseline for the sites where innovations will be assessed and capacity building support will be provided to partners and value chain actors.

Follow up Research Agendas

Although the program was launched nearly three years ago, the value chain teams are still relatively early in transitioning to follow up research agendas focused on assessing technological and institutional innovations and value chain upgrading strategies. This sub-section presents findings on the emerging research agendas, starting with animal science research, and then turning to social science research and research on post-production value chain technologies.

Animal Science Research

When reviewing the animal science research agendas, the main issues looked at were (a) relevance for pro-poor value chain upgrading and (b) what is new since the program started. Relevance for pro-poor upgrading is particularly important because, as indicated in the VCTS flagship SIP, a main goal is to generate information on how poor women and men integrate and scale animal science technologies. The issue of how much is new is pertinent since in most countries, the partner centers were already engaged in animal science and technology development research before the program started.

Many animal science researchable issues were identified for each of the prospective value chains even at the stage of the program proposal. These might have served as the basis for immediately launching applied and adaptive research. If this was the case, it is not apparent from program documents. Rather, the value chain teams identified “best bet technologies” by drawing on previous research and through a combination of situational analyses, scoping missions, value chain assessments and consultative workshops. There were also specific investigations into feed and feed supply chains in several countries, including Egypt, Ethiopia, Tanzania, Nicaragua and India. In Ethiopia, Tanzania and India, the feed assessments were made using FEAST and TechFit assessment tools.

In all the sites visited, the value chain teams had identified initial sets of best-bet technologies for evaluation and had launched follow up investigations. Follow up investigations on best-bet technologies had been launched in Nicaragua and Bangladesh as well. Based on program documents and reported indicators, it appears that follow up animal science research had not yet started in Vietnam, India and Burkina Faso.

The main areas of investigation – identified through program documents, site visits and updated program indicators – are shown in the following table. The list is no doubt incomplete but does show most areas of animal science research being addressed by the value chain teams.

Table 9: Technological Innovations Being Assessed

| | |
|------------|---|
| Bangladesh | Aeration technology to boost fish seed production – installed in 38 hatcheries |
| | Cohort breeding to increase accessibility to high quality seeds of GIFT |
| Egypt | Abbassa improved strain of Nile Tilapia |
| | Cage farming catfish – exploratory pilot |
| | Use of soya-based fish feeds |
| Ethiopia | Breeding programs (including community based breeding) |
| | Introduction of adapted forage species |
| | Preventive animal care according to animal health calendars |
| | Fattening schemes based on local feed resources |
| Nicaragua | Varieties and hybrids of <i>Brachiaria humidicola</i> |
| | Feed and forage options for waterlogged soils |
| | Carbon insetting – paying farmers for sequestering carbon at origin – case study |
| Tanzania | Forage production – demonstration |
| Uganda | Mobile phones for disease surveillance and live weight prediction – exploring possibility |
| | Incorporating sweet potato residues in pig diets – trials |

| | |
|--|--|
| | Use of biogas to management pig slaughter waste – pilot only |
| | Lateral Flow Test for detecting cysticercosis infected pigs – pilot study only |
| | Feeding strategies for different pig genotypes (local vs improved breeds) |

The main priorities for innovations assessment in the sites visited were community based breeding in Ethiopia, local feed trials in Uganda and Tanzania, and continuing improvement and appraisal of the improved Abbassa strain Tilapia in Egypt. Feed availability, particularly seasonality of feed, was a priority issue in Nicaragua as well as in Ethiopia, Uganda, and Tanzania. Most other investigations appeared to be at a very early stage of assessment or case study level piloting.

A major area of emphasis, particularly in Tanzania, Uganda and Ethiopia among the sites visited, had been introduction and assessment of integrated animal technologies. The focus on integrated interventions seems very good; potentially distinguishing the technology work of the program. The integrated approach could become a major strength of the program if the integrated concept is extended to address both institutional and technological aspects of integrated packages – which already seemed to be a strategy being pursued in Ethiopia, Uganda and Tanzania.

A positive finding from the standpoint of being pro-poor is that the value chain teams clearly had avoided top-down promotion of inappropriate technologies. If anything, the teams had focused too much on strategies for solving problems internally – with local breeds, with local feeds, etc. This approach is likely to lead to incremental improvements but not to significant changes in local livelihoods. This is not to say that local, incremental solutions are not needed; they are appreciated according to the producers met during the site visits. However, they are not necessarily the best solutions and should not be pursued as a matter of principle or dogma.

One of the main concerns arising from the review of animal science investigations initiated thus far is that there appeared to be very few new areas of investigation on new topics. While it is understandable that most animal science interventions had built on areas of previous action and strength, it begs the question whether there is not a need for a wider range of priority innovations. It also leads to the question as to why it was necessary to delay, or at least reduce the emphasis on, investigations on animal science and technologies development while investments were being made in value chains characterization. The value chain teams could have started work on the “low hanging fruit” and then made adjustments as knowledge was gained through value chain assessments and action research.

Even if the subject matter of follow up animal science research had not yet changed much from what was going on before the program started, there had been changes in the way the research agenda had been developed. As pointed out in the staff survey, the value chains work has helped to ensure that animal science research is better informed by and embedded in the livelihoods and value chain contexts of the producers, with more attention to backward and forward linkages. The staff also noted that the animal science research is more demand driven and impact oriented. One of the external experts made the observation that the animal science interventions “are now viewed from the point of marketability of the animals”. All of the above point to increased responsiveness to the needs of poor producers and, most likely, increased chances of success as innovations assessment moves forward.

Social Science Research

The point was made above that many animal science researchable issues had been identified in the program proposal but had not yet received attention. The same is more or less true for social science research. Some of the areas of social science research identified in the program proposal included:

- strategies for addressing gender and equity
- quantification of productivity gaps

- ex-ante modeling, including evaluation of the effects of risks
- organizational strategies to address the lack of economies of scale
- strategies for effective public-private partnerships
- strategies for reinforcing innovation capacity

The greatest progress had been made on gender transformation strategies. The attention given to gender analysis had been a strong point of the program. It is fully justified as a top priority because of the gender roles and power relations associated with the target species. It is perhaps not as clear that as much investment was needed in methodology development but this was made under the Gender theme. The value chain teams were beneficiaries and the value chain assessments were better as a result of the investments made on methodology development.

There had not yet been much investment in quantitative social science research, although in the sites visited there were recent recruitments to establish capacity for modeling and quantitative analysis. The decision of the program on how much to invest in quantitative socio-economic research will be important to both effectiveness and efficiency of the program's value chains approach. While modeling, quantification of productivity, and many types of formal risk analysis are not necessary for identifying and working on value chain upgrading strategies, most value chains development programs have relied qualitative and participatory appraisals; almost a "planning without facts" approach. The capacity of the program scientists to quantitatively analyze production systems and value chains could be developed into a point of attraction and unique selling point for the program. The key will be to make wise choices on where and when to invest in data collection and quantitative analysis. If it appears that modeling and quantification are being done because of relatively academic reasons, this would likely work against the program's credibility with financial institutions and development partners. However, if quantitative analyses are used to more objectively assess issues that are critical to making hard decisions on where to work along the value chain, such as risk-benefit trade-offs faced in switching from open market sales to formal and informal contractual relations, then this could be an important contribution and basis for supporting replication and scaling.

The program is working on organizational strategies for over-coming economies of scale but does not seem to be conducting enough socio-economic research on organizational strategies. To address the lack of economies of scale, the program is focusing almost exclusively on farmer groups, often times in combination with development of marketing and service hubs. These were clearly a focus for the programs in Uganda, Ethiopia and Tanzania. In Egypt, the program is supporting development of women retailer groups to address both economies of scale and gender equity. While group formation and hub development are common activities in value chain programs, there are other organizational options for addressing lack of economies of scale. Common examples include direct contracting, commercial cooperatives, and block production. There is an intention in Tanzania to compare the viability of hub models and associated services for different types of buyers but this is the only clear case of investigation of different organizational models. Different organizational models could and should receive attention in Tanzania and elsewhere, starting with a review of the evidence already available from other organizations that have been working on strategies for strengthening producer-market linkages.

Social Science Research
Just over 40 percent of the staff agreed that an appropriate research agenda had been defined for the social sciences of value chain development (2/3s of those who had a clear opinion). Technical scientists were less convinced than were the social scientists.

The program has done little to date on research related to public-private partnerships. Over the past five years, public-private partnering has been a hot topic in development and a major interest of governments. As a result, many organizations have committed resources to appraisal of PPPs and drawing lessons on how

best to support. During this time, attention has shifted from a long-standing focus on co-investment models to engagement strategies for mobilizing the resources and expertise of parts of the private sector to support smaller and more vulnerable segments of the private sector, mainly small scale producers but also small agro-processors. The UN Food and Agriculture Organization recently completed a cross-regional appraisal of such programs covering Asia, Africa and Latin America. The program should start by reviewing what is already known and then move into action research, if further research is needed, making sure not to start over with “learning from scratch”.

In the program proposal, the first sub-component of the value chains component was sector and policy analysis. It was expected that the program would build consensus on the roles of the target value chains in national development strategies, generate evidence to support value chain investment, and better align policies with pro-poor value chain development. The situational analysis reports and value chain assessments gave strong foundations for this contribution of the program. Key policy issues were identified and strategies for addressing challenges were discussed in follow up workshops. In the site visited, high priority was given to establishing platforms to create or reinforce institutional capacity to further assess, discuss and promote pro-poor sector strategies and policies for the target value chains.

The progress to date is commendable but still falls short of what is needed. Policy change is not only about multi-stakeholder dialogue and participatory processes. So far, the evidence generated on market channels and constraints has not been new information for policy makers. Policy analysis initiatives are needed to bring in or generate information on new options and opportunities from other contexts – with correspondingly less reliance on participatory processes. In most cases, participatory processes lead to restatement of known constraints and previously tried (but often failed) solutions. The program needs to be more of an innovation leader, as was recognized by several respondents to the staff survey.

Several other areas of social science research have not yet received much, if any, attention but should.

Sector level research, beyond the situational analyses, is needed to better clarify the economic context and development dynamics within which the value chain actors are operating. A better understanding of value chains from a dynamic perspective is essential for identifying strategies that can make significant and sustainable impacts on the SLOs.

At a more mundane level, there is need for economic analysis of issues such as the seasonality of production and demand. There is need for assessing impacts when technologies do move to scale, such as the Abassa Tilapia strain. This is an important technical innovation with demonstrated and rapid benefits to producers but the wider impacts on the value chain have not been assessed. As soon as interventions start all along value chains, there will be need for analysis of logistics, distribution costs, product quality and other opportunities for improving efficiency and productive along the value chain.

One of the more important strategies in the program proposal was to assess a range of different development strategies and interventions. This was to be “research on development” not only research for development. This is not yet being done systematically but can and should be a major focus going forward. Many development partners have piloted approaches based on the practical need to deliver under specific timeframes or have picked up methods while working in value chains projects of various donor agencies. In both cases, there have been insufficient appraisals of lessons and success factors and so there is often “replication of errors” rather than “success case replication”. At a minimum, lack of systematic research on development interventions has led, in general, to unnecessary inefficiencies, over-reliance on stakeholder opinions, and reduced sustainability. The program can make a major contribution by applying a research lens to developmental work. As mentioned above, there had been a start on this in some sites but “research on development” is not yet well thought through and is certainly not mainstreamed as a priority action area. Sound research on development interventions should make the program more attractive to prospective

developmental partners since the potential for learning would be a clear reciprocal benefit, reducing the need for “partnering by contract”, which is what is going on for the most part now.

Over the past ten years, a substantial body of knowledge has been developed through practical appraisal of emerging, innovative business models for input suppliers, financial service providers, warehousing, etc. There has also been a lot of attention to strategies and requirements for embedding services in contracts. This is a rich field of action and investigation because sustainable development of essential business services is so critical to value chain upgrading. The program does not have the time, resources or need to start over. The program does need to ensure it is well informed and capable of building on best practices.

The extensive work on development of service businesses has not, however, generated validated knowledge on how to develop sustainable business services for poor producers, particularly services related to enterprises that generate products sold into local markets and value chains with minimal post-production value addition. Generating information on strategies for private sector services provision in this context would be an important contribution of the program. Meanwhile, it is likely that the poor-producers being targeted by the program, at least in the sites visited, will continue to be dependent on public sector supplied services. The feasibility, sustainability, efficiency and quality trade-offs between business supplied and public sector supplied services would appear to be a critical issue the program should address.

There is also a need for research on business models linking producers to processors and business models for addressing the challenges faced by micro, small and medium enterprises involved in processing and marketing of livestock and fish products. During the site visits, several opportunities were identified for business models research that would help the program develop and assess strategies for pro-poor value chain development. Some examples are given in the text box below.

In Ethiopia, the Luna Abattoir has quite a steady end market demand but operates under capacity because it does not have reliable supply. Menz sheep have name recognition in the Middle East but Luna has to have sheep that meet specific weight and size requirements. Luna is willing to provide outreach support but it faces costs and risks in doing so. Luna believes that a viable procurement model cannot be established and so it is setting up its own production. Other abattoirs now being set up in Ethiopia through public-private partnerships will face the same problems in securing supplies. What models can be set up to meet the needs of the abattoirs while also creating markets and generating services for sheep producers in the highlands?

In Uganda, Fresh Cuts does not have traceability back to farms and cannot easily ensure pig product quality and safety. It also faces irregular supply and cannot readily get animals with 10-15% fat content or under. A feed supplier met during the site visit had to charge high prices because he did not have enough capital to buy at harvest or stock other ingredients. His equipment was poor quality, further increasing his costs. The Wambezi Cooperative, the only pig slaughter facility in Kampala, used to do processing but lost this capacity and has not figured out how to re-establish it after more than 20 years even though other processing companies have been established. The manager of Wambezi said they want to establish a cold store but cannot figure out how to make this financially possible. The cooperative is also having a problem with delayed payments from processors. Local farmers visited during the field trip were trying to develop a business by producing wieners for other local farmers. They faced a lot of business decisions on how to do this, as did the local cooperatives that were just getting started on developing a hub for collective marketing.

In Tanzania, TangaFresh – one of the largest milk processors – faced quality problems, high seasonal fluctuation in supply and under-utilization of its facilities. Smaller scale processors, such as Shimbani in Morogoro, faced even bigger problems in securing supply and producing affordable milk products. In Egypt, the women retailers have benefited from project supplied ice boxes, and the groups have now have a savings and loan program. The women though are still operating on the smallest possible margins, selling informally on the street. There is a possibility they could take advantage of their improved organizational

capacity to jointly buy and transport from the wholesale market, establish positions in the formal market and add value through fish grilling. Could this be a viable business for them once there are no project subsidies?

Research on inclusive business models is not new but it remains an under-developed area even in value chains programs. One of the program partners, CIAT, is familiar with and has experience in business models appraisal. The program could take advantage of this capacity to figure out what the program could and should be doing to appraise and draw lessons on success factors for producer-buyer linkage models and business models for micro and small businesses involved in post-production stages of livestock and fish value chains for the species targeted by the program.

Research on Post-Production Technologies

As shown in the table above there was no indication that any investigations had been started on transport, cold chains or cold stores, food technologies, processing equipment, or logistical systems. There certainly are productivity and efficiency problems in all of these and other post-production value adding technologies. The program will have to find a way to address technology opportunities and constraints all along value chains if it is to be successful in enhancing the efficiency and productivity of pro-poor value chains.³³

Methods for Assessing Innovations

The program had so far relied on two main methods for assessing technological and institutional innovations. One had been to establish close linkages between the staff and partners responsible for initiating innovations assessment and the target beneficiaries and other stakeholders. By making regular visits to the sites where innovations are being introduced and assessed, the people responsible for introducing the innovations keep themselves informed on what is working well or not, and also the extent of interest the intended beneficiaries have in the innovations. This participatory approach to innovations assessment is fine as a first step and is flexible since it is possible to get useful feedback even from demonstrations and pilot tests at one or two sites.

The second main method had been to promote and support the same or similar innovations at multiple sites. This approach is useful for gaining insights into the interface between technologies and context.

In addition to these methods, the program is in general using a broader perspective for assessing innovations. As one person said in the staff survey,

“In the past the expected impacts of the innovations were analyzed mostly in the farm context, now it is clear that impacts of innovations are not only dependent on how good is the technological innovation, but considers implications on gender, the role input and service providers could play in the implementation beyond the trials, and how other actors in the value change (post-farm) could benefit/affect the success of the innovation.”

Scope of Value Chain
Only one-quarter of the staff agreed that the program had been conducting research on the entire value chain; none among the social scientists. Less than one-third of the stakeholders agreed.

³³ There is an on-going “chicken and egg” debate among value chains specialists over whether it is necessary to resolve supply-side constraints at the producer level before working on the entire value chain, versus the necessity of addressing critical constraints all along value chains in order to increase incentives to producers to transform their production practices. In general, the value chain teams in the sites visited had chosen to focus first on increasing producer productivity, including the provision of basic services to producers.

To the extent that the value chain teams are taking into account gender roles and upstream and downstream impacts, both would certainly represent positive steps in innovations assessment. There was no indication that this was being done in an objective, replicable manner as of yet.

While the above informal and participatory methods for innovations assessment are understandable during the early stages of introducing innovations, they are far from satisfactory unless complemented with systematic designs for innovations assessments, frameworks for comparative analysis within countries, and – at some stage – methods for comparative appraisal across value chains, sectors and countries.

Most of the animal science innovation assessments were demonstrations or pilot level action research. The demonstrations and action research, to the extent this was being done, were not being implemented in a manner that would provide an objective basis for refining innovations and developing new solutions. Going back as far as the early and mid-1980s when the CGIAR centers and many other organizations were actively involved in farming systems research, there was a lot of innovation on methods for carrying out demonstrations and trials in a manner that generated useful and valid data to assess results without interfering too much in producers' normal management practices. To all appearances, the value chain teams did not seem to be aware of, or at least were not applying, methods for assessing technologies under farmers' conditions developed and validated during the farming systems era.

Aside from the seeming absence of objective methods for assessing innovations, there was no indication that the teams had undertaken feasibility analyses on alternative strategies prior to or following the demonstration and promotion of chosen best bet innovations. The teams could have used the information available from the value chain assessments to have made at least "quick and dirty" feasibility analyses on different innovations. There is an intention is some of the sites to develop models for ex ante assessment of innovations. While this could well be useful, if done pragmatically and cost-effectively, the program could start with simpler approaches for feasibility analysis. As the saying goes, "something is better than nothing".

One other issue to note with respect to innovations assessment is the potential distorting effects of free inputs. Free inputs and services were being provided in Ethiopia and Egypt, and probably will be – if not already are being – provided in Tanzania, Uganda and other countries. The issue of "pump priming" is a tough one to get right. There is room for legitimate professional disagreement on whether provision of free inputs and services is necessary or should be avoided. In practice, most value chain programs do engage in some types of pump priming so there is nothing unusual in the program's practice of doing so. However, pump priming is a problem when the main or only way of assessing innovations is beneficiary feedback. In this light, the program should figure out how to introduce frameworks and methods for designing and assessing innovations, and should clarify conditions and timeframes for pump priming subsidies.

Comparative Advantage

Institutional comparative advantage is not a particularly well defined or understood concept, although it is used quite frequently. More times than not, the term "comparative advantage" is used in a manner than can be equated to the recognized capacities and major roles of an organization or program. This was clearly the main interpretation when the question of the program's areas of comparative advantage was posed to experts, staff and stakeholders during the evaluation. This sub-section summarizes these "eye of the beholder" responses and then gives the evaluators own assessments.

The few experts who replied to the survey all said that the main basis of the program's comparative advantage is the capacity to apply "solid animal science research" to livestock and fish value chains development. The experts noted that the partner centers have appropriate experience and expertise to address animal science research problems and help solve bottlenecks arising in the value chains. One expert considered that capacity to conceptualize and apply value chain analysis tools relevant to livestock and fish

value chains is a comparative advantage. The experts also pointed out that experience in value chains work is limited so it is uncertain whether the program has a comparative advantage for value chains work specifically.

Program stakeholders at the sites visited and in the stakeholder survey pointed to five main areas of comparative advantage. The areas mentioned appear to reflect expectations about the roles of the program, not necessarily areas of comparative advantage.

- 1) The most frequently identified comparative advantage was the capacity to bring in experiences from various countries or, as was said in one survey response, “worldwide experience and lessons”. During the wrap up workshop in Uganda, the stakeholders pointed to the capacity to link with other countries but also noted that the program could exploit this advantage better if more attention was given to country comparisons. The potential role of the program in bringing in experience from different countries was a point of emphasis in Tanzania as well.
- 2) The role of the program as a catalyst was identified a program comparative advantage in Ethiopia, Tanzania and Uganda. One observation made was that the CGIAR scientists help to clarify problems and strategies through systematic diagnosis and analytical support. Another was that the program scientists make sure that the work is moving forward. Yet another observation was that the program catalyzes the value chains work by leveraging capacities beyond the national research systems.
- 3) Quite interestingly, capacity to mobilize resources was identified by stakeholders as a program comparative advantage in both the stakeholder survey and during the site visits. In one country, this clearly referred to the role of the program in underwriting research by national researchers. In another country, this appeared to acknowledge the success of the program in mobilizing funds through a program-linked bilateral project. One of the stakeholder survey responses simply noted that the program appears to have abundant resources; presumably, this means compared to researchers working in national systems.
- 4) The program’s ability to establish effective partnerships was cited in the stakeholder survey and at one site. The site, not unexpectedly, is Egypt, where Care has a lead role for the developmental activities of the program. In the stakeholder survey, capacity for partnering with universities and policy makers was identified as an area of program comparative advantage.
- 5) Some stakeholders, but not many, pointed to research competence as an area of comparative advantage. Some specific areas of strength noted were research capacity on feeds and diseases, and capacity for implementing an interdisciplinary approach.

The respondents to the staff survey identified four main areas of program comparative advantage relative to other research and knowledge suppliers: the Livestock and Fish value chain R4D approach, complementarity of expertise, staff competency and connection to real world field situations. It is worth noting that the value chain R4D approach of the program was the most frequently mentioned source of comparative advantage.

The evaluators of course also have “eye of the beholder” views on the program’s main areas of comparative advantage for value chains R4D to support animal food source value chains development; three in particular.

One is that the program can build on the partner centers’ long-standing animal science capacity. Most of the program’s livestock interventions very clearly build on strengths of ICARDA and ILRI. This is not so true for the pig value chain but it clearly is the case for the other livestock value chains. The value chain teams in Egypt and Bangladesh were building on WorldFish experience related to pond aquaculture and BMPs from across the globe, and its substantial investments in both countries in developing improved genetics. CIAT

was building on its strengths in feed and forages. One area of concern is that the program does not appear to be building enough on CIAT's experience and validated methods for strengthening market linkages.

Another is the widely recognized role of the CGIAR centers as intermediaries between advanced and highly specialized research centers and national research systems. As was noted in Nairobi, the program scientists interact closely with national systems but also know real science. The program has a particularly strong and clear mandate for impact that advanced research institutes do not. While capacity clearly has grown over the past 20 years in national research systems throughout the developing world, there is still a role for the program to play in reinforcing national systems capacities – as was clearly recognized and appreciated during the site visits and in the stakeholder survey.

Adaptation of integrated animal science technologies combined with attention to work on enabling services and policies is another potential area of comparative advantage for the value chain R4D approach of Livestock and Fish. So far, this is a potential but not realized area of comparative advantage. The value chains work has not yet been sufficiently focused on innovation testing and development of scaling strategies to fully take advantage of this potential strength.

Key Points, Recommendations and Working Suggestions

Key Points

- The site selection approach has clear methodological strengths to offer other practitioners.
- The quality and comprehensiveness of the situational analysis reports were very good but the reports are limited as priority setting tools.
- The value chain assessments were comprehensive and directly engaged partners and value chain actors in the assessment process; the main limitations of the assessments were the length and complexity of the modules and disproportionate coverage to the problems faced by producers.
- There were few, if any, new areas of animal science research as a result of the program's investment in characterization and diagnosis.
- More research is needed on the economic context and development dynamics within which value chain actors are operating, and on how to develop sustainable business services for poor producers.
- The teams were not using systematic comparative frameworks and adaptive research designs to generate valid information on the benefits of the innovations being assessed.
- Integrated approaches could become a major strength of the program.
- The teams need to do more to address technological opportunities and constraints all along value chains.
- The teams have not taken full account of the extensive previous work and literature.
- The attention to gender is a strong point in the program's VC work which could be further strengthened.
- There is a need for research on business models linking producers to processors and business models for addressing the challenges faced by micro, small and medium enterprises.
- The teams should invest more in feasibility analyses on alternative technological and institutional innovations.

Recommendations

1. Ensure that the value chain teams identify and assess innovations for three or more specific value chains in each country, ranging less formal local market chains to formal sector chains leading to urban areas. [VCC]
2. Ensure that the value chain teams address issues at multiple system levels ranging from local farming systems and market linkages to sector development, with correspondingly less focus on micro, community based piloting. [VCC]
3. Ensure that attention is given to at least three nodes of value chains, even for chains leading to local markets. [VCC]

4. Ensure that attention is being given to enterprise linkages and synergies in the design and assessment of animal science innovations. [VCC]
5. Put relatively more resources into research related to input dealers, traders, processors, transporters, and coordination and alignment among the value chain actors. [VCC]

Working Suggestions

- § More recently started sites should invest less up front in the initial appraisal of value chain innovation priorities. [VCC]
- § Introduce and use sound priority setting criteria driven by evidence and business realities. [VCC]
- § Give priority to developing and testing strategies for effective integration of multiple innovations. [PM, VCC]
- § The feasibility, sustainability, efficiency and quality trade-offs between business and public sector supplied services should be assessed. [VCC]
- § Ensure that the value chain teams are investing in appraisal of the competitive advantage of the specific value chains for the target species. [PM, VCC]
- § Ensure that informal and participatory methods used for technology and institutional innovation assessments are complemented with systematic designs. [VCC]
- § Reinforce in-house competency for cross-site support on on-farm research methodology [PM, VCC]

6) How strong are synergies between VCD and other thematic research?

Three main issues were assessed with respect to synergies between the R4D site value chain teams and thematic research under the other flagships: (a) extent of collaboration and coordination, (b) changes in thematic research due to information from and interactions with the value chain teams, and (c) extent to which the work of the value chain teams had benefited from the technical flagships. It was difficult to tackle these issues since there was relatively little interaction with the thematic scientists and only in Nairobi. Plus the evaluation was a single snapshot in time of a set of complex evolving relationships. No doubt the upcoming IEE will be better positioned to give the issue of synergies the attention that it requires.

Based on brief discussions in Nairobi and the four sites visited, there did seem to be reasonably good cooperation and collaboration between the value chain teams and several if not most of the flagship scientists. The extent of collaboration – or at least satisfaction with the level of collaboration – varied depending on the flagship and the R4D site.

The gender scientists confirmed expectations that there had been close collaboration. They pointed out that one or more of them participate in the R4D site planning meetings, and that they were working towards having a gender scientist in each value chain team. There was not an opportunity to meet with the targeting specialists but they have been core contributors to the value chains work at the R4D sites. There obviously had been cooperation and are strong synergies with the R4D sites by both gender and targeting scientists.

Based on documents reviewed and the site visits, it seemed that that there had been good collaboration between Feed and Forages scientists and most of the value chain sites as well. ILRI, CIAT and ICARDA scientists were involved in field testing FEAST, a Feed Assessment Tool, in Ethiopia, India and Tanzania. Feed and Forages scientists supported and participated in evaluation of feed resources and feeding in Nicaragua, Tanzania, India, Ethiopia, Egypt and Bangladesh. Policy constraints to feed use were assessed in Tanzania and Nicaragua. The scientists from Feed and Forages said that they were participating in value chain planning meetings at some sites. The Feed and Forages scientists appeared to have been most regularly involved in Tanzania, Uganda, Ethiopia and Nicaragua.

It seemed that there had been good collaboration between the Genetics scientists and the value chain sites. The Genetics theme leader is from WorldFish and introduction of improved genetics is the driving intervention in both Egypt and Bangladesh. Most of the WorldFish staff based in Egypt work had been

involved in the Tilapia breeding program, even those who now have responsibility for best management practices training. A similar situation holds for Ethiopia. ICARDA small ruminant geneticists are based in Ethiopia and had been actively involved in the value chains work at that site.

As shown in the latest staffing update on the program wiki, the ILRI based geneticists have specific responsibilities for providing support in Tanzania, Nicaragua, Vietnam and Uganda. Presumably the Genetics flagship will designate focal points for Burkina Faso and India when those sites reach the stage of launching research related to improved animal genetics. The Genetics model of appointing focal points for each R4D site is a good model and presumably is something that the SASI and Feed and Forages flagships will consider as well.

The story is quite different with respect to collaboration between the Health scientists and the value chains teams. The Health scientists said that coordination and integration with the value chains work was better in some locations than in others but the impression gained from the sites visits was that there was not strong collaboration between the Health scientists and teams working at the R4D sites. This is fully understandable. There are relatively few Health scientists working in the program and they are focused on longer term strategic and applied research. Animal health issues had not been identified as higher priority problems in Egypt or Tanzania.³⁴ African swine fever is the biggest pig sector problem in Uganda. One of the ILRI Health scientists is working on this problem but not with a focus on farm level solutions. Collaboration no doubt will increase between Health and the team in Uganda as work on the epidemiology of African swine fever advances and the Health flagship is reinforced with an epidemiologist. Meanwhile, the Uganda team now includes an animal geneticist.

Collaboration among Flagship Managers
Barely one third of the staff agreed that there has been effective and efficient collaboration between managers of VCD and the other thematic components.

From the views expressed at the R4D sites, there did not seem to be serious concerns about collaboration with the thematic flagships. The team in Uganda said that the level of collaboration depended on the flagship. They noted that ILRI did not have much capacity on pigs. In Tanzania, they said that there had been concerns early on about what was perceived to be lack of responsiveness from the theme scientists but that the situation had greatly improved now that most planning is being done jointly. It was reported in Egypt that there had been joint planning with some of the thematic flagships. As a general observation, it would appear that a sound strategy for further improving collaboration and cooperation would be to appoint focal points and organize joint planning to the maximum extent possible.

Synergies with Thematic Research
55 percent of staff agreed that the value chain approach had impacted on the scope of animal science research; just over 40 percent agreed that the value chain agenda effectively informs and draws on the technology themes (although many were neutral on both questions). ILRI staff expressed greater skepticism about synergies than did other staff. More than two-thirds of stakeholders agreed with both statements.

From what little could be ascertained during the site visits, it seemed that coordination and collaboration was driven mainly by scientist interests and professional working relationships. There was no indication that this was the result of joint needs assessments or agreements between the value chain coordinators and thematic flagship leaders. In fact, there was no mention of collaboration at the level of the flagship managers during the site visits. Scientist to scientist relationships probably are the best way to develop cooperation and collaboration anyway but there would appear to be a need to review,

³⁴ In Ethiopia, animal health issues had been identified as high priority but no innovations had yet been piloted because of lack of staff. (NB: clarification provided in comments on first draft.)

appraise and make adjustments at the leadership level – if this is not being done already; particularly to make sure that there is strong collaboration at the sites just moving into the active stage of animal science research. These sites generally are farther from where most of the thematic scientists are based than is the case with the earlier starting sites.

The thematic scientists who have been collaborating on a regular basis with the teams at the R4D sites almost certainly have gained a better appreciation of the diverse value chain contexts and the relative importance of different animal science issues in the various value chains. In the program proposal, this was anticipated to be one of the benefits thematic scientist collaboration in the value chain sites and it is good to see that this seems to have happened.

It would be nice to also believe, as stated by one staff member, that “the value chain approach is increasingly serving as a framework to ensure that the technical flagships are working together and cater to the specific needs of value chain actors”. A majority of the staff replying to the survey believes that there have been changes made as a result of the value chains assessments. However, none of the technical flagship scientists met in Nairobi or Ethiopia mentioned examples where adjustments had been made in flagship research agendas and priorities in order to address issues arising from the value chain sites. As one scientist said, the value chain appraisals had “sharpened thinking a bit but had not greatly influenced the direction of the animal science research”.

There would appear four reasons, among others, why the value chains work might not have impacted on the agendas of the technical flagships as much as might have been hoped.

- 1) The value chain assessments took a relatively long time to complete. Meanwhile the scientists in the animal science flagships had to develop and deliver on their own flagship strategies. Lack of impact in part appears to be a simple timing issue.
- 2) Nearly all of the technological challenges identified at the sites have long known solutions “on paper”; the problem is application, adaptation and use. The value chain assessments and stakeholder consultations would have had to have generated a convincing case that the flagship animal scientists needed to substantively change their research agendas – and this was not the case.
- 3) The value chain assessments were broad and descriptive. Animal science disciplines have their own diagnostic and priority setting methods, as do all disciplines. The utility of the value sites as mechanisms for influencing the research agendas of the animal science flagships would undoubtedly be greater if and when the flagship scientists and the value chain teams coordinate to carry out focused diagnostics using science based tools to provide information for future planning.
- 4) It is also difficult for the flagship animal scientists to shutter their eyes to research needs and priorities across the regions where they are working. The country focus approach of the program is essential for context specific value chains work but the results from a small number of countries are not necessarily convincing enough to change the agendas of the flagship animal scientists.

So far, the value chain teams have not drawn heavily on results of the program’s technology flagships either. There is relatively little potential for the flagship research to contribute significantly since the main needs at the value chain sites are adaptive and action research. The scientists in the animal science flagships have been and will continue to play major roles in technically supporting the value chain teams, partners and stakeholders in considering and appraising responses to the problems faced. But, it is not clear that the flagship scientists have identified or introduced new solutions to the “demands” of the individual value chains arising out of the research of the flagships. In any event, it is too early for this to be a reasonable expectation.

It is important to recall that the above observations about synergies are based on limited information from a single point in time. The positive collaboration patterns noted at the start of the sub-section inevitably will lead to changes in perspectives, knowledge and behavior. There is every reason to believe that as information flows and feedback loops strengthen, there will be growing convergence overtime between the agendas of the animal science flagships and animal science research at the R4D sites.

Key Points, Recommendation and Working Suggestion

Key Points

- There was good cooperation and collaboration between the value chain teams and several of the flagship scientists.
- The value chains work has had little impact on the agendas of the technical flagships; value chain teams had minimally drawn on results of the program's technology flagships.
- There is a need to strengthen collaboration and communication between VC and Flagship science teams.

Recommendations

- § Establish a mechanism for regular consultation and coordination at the level of the value chain coordinators and thematic flagship leaders. [PM]

Working Suggestions

- § Appoint focal points and organize joint planning, where this is not already being done. [PM, VCC]

7) To what extent has there been sufficient and effective multi-disciplinarity?

Extent of Multi-disciplinarity

The value chains approach is a systems-based framework, which requires multidisciplinary perspective, capacity and action to be effective. Several external factors constrain the extent to which R4D teams can effectively implement a multidisciplinary value chains approach. The most important constraints were touched on in the Program Management part of the findings. The teams are understaffed and underfunded, with members living in different countries and different parts of countries. Plus, incentive and supervisory systems do not sufficiently reward multidisciplinary teamwork and interdisciplinary problem solving.

This section gives findings on the extent to which the R4D teams have been implementing a multidisciplinary value chains approach despite the constraints under which the teams have been operating. The sub-section also briefly addresses the perceived transactions cost of implementing a multidisciplinary approach.

The site visits and documents review showed that the value chain teams and partners had been using multidisciplinary approaches and systems-frameworks for characterization, assessment and priority setting. All major components of the value chain tool kit use systems based frameworks – site selection, situational analyses, and value chain assessments. In the value chain assessments, there had been attention to livelihoods systems even if the sustainable livelihoods framework had not been used. The gender analysis tools focus on intra-household relationship and how these impact on production systems management. As one respondent to the stakeholder survey said, the “multidisciplinary composition of research and involvement of key actors and stakeholders in the definition of research priorities is a new feature of animal science innovation under the program.”

There are clear indications that the multidisciplinary frameworks and approaches used for value chains assessment and priority setting positively impacted on the follow-up agendas of the value chain teams. Some examples include:

- Clearly more attention to institutional innovations and integrated institutional-technological innovations

- Commitment to work on innovation platforms
- More integrated approaches to animal science research
- More attention to gender roles in technology innovations assessment
- More engagement with diverse stakeholders (discussed more below)

Based on the site visits, including Nairobi, there appeared to be strong awareness of and commitment to the need for a multidisciplinary approach in animal science innovations development and assessment. This seemed to be particularly true for the geneticists and feed and forages scientists in Nairobi and in the three East African Sites. CIAT feed scientists were collaborating closely with the multidisciplinary teams in Uganda and Tanzania. In Egypt at least one of technical scientists had even shifted to interdisciplinary mode, taking responsibility for addressing socio-economic issues.

However, there were at least three important multi-disciplinarity problem areas in technology innovations assessment work at the site visited. One was that there did not appear to be any inputs from economists for designing demonstrations and trials in such a way as to be able to evaluate the benefits. As a result, there had been no economic analysis of results. In the heyday of the farming systems era, many farming system economists spent as much or more time designing, helping to implement and analyzing on-farm trials than they did on surveys.

More importantly, both the animal and social scientists seemed to be too comfortable working in a “farming systems with pre-determined focus” mode. In all of the livestock value chains, there are critically important enterprises linkages impacting on the enterprises for the target species. For example, two female farmers in Uganda who were producing wieners for other farmers had been able to do so because of income from their households’ coffee sales. Other farmers in the same area were complaining about lack of finance but they also had cropping enterprises that were a potential source of resources. There was no indication that these linkages were being assessed or being considered as possible action areas for the team’s value chains work.

Another issue was that the teams did not seem to fully appreciate the need for multidisciplinary action on support services and higher level policy and regulatory issues – even though the teams did recognize these as issues covered in the value chain approach. For example, there are technical and economic dimensions to improving feed supply or veterinary services. Similarly, there are technical and economic dimensions to most sector policy and regulatory issues. An example is identification and appraisal of cost effective regulatory systems for quality controlling vaccinations. The more that the teams turn to problem solving on these broader systems dimension of value chains, the greater the requirement will be for not only more multi-disciplinarity but full interdisciplinary approaches.

One of the biggest risks faced in implementing a fully multidisciplinary value chains approach are the transactions costs involved in getting people with diverse competencies and interests together working under common systems-based frameworks. There is no doubt that these transactions costs can be considerable. According to the staff survey, relatively few of the staff believes that the transactions costs thus far have been acceptable. As one staff member reported, “there is recognition of the need to actively promote and support multi-disciplinarity” ... “We just need to establish structures that help make it happen without everyone always in meetings.” Finding efficient ways to lead, design and implement multidisciplinary work on the multiple dimensions of the value chains approach would appear to be an urgent priority.

Multi-disciplinarity
Most staff and stakeholders agreed that there have been clear benefits from the program’s multidisciplinary approach. Only 27 percent of staff agreed that the transactions costs have been acceptable.

Disciplinary Composition of R4D Teams

One of the greatest challenges faced by the program is that the program scientists do not have broad enough experience and necessary competencies for addressing all facets of value chains R4D. This is recognized in the program and efforts are being made to build up the necessary competencies through partnerships and recruitment. The findings in this sub-section focus on the evolution of disciplinary competencies at the R4D sites. Some staff positions are gradually being added to the site teams and there will be more opportunities to do so as bilateral funds are mobilized. The question is what competencies should receive priority attention?

In the sites visited, recent additions had been made to reinforce capacity in animal health, gender, communications, and economics. Most of the people added were early in their careers and were not in international scientist positions. Other than efforts to place gender scientists at every site, mentioned as a priority in Nairobi and at some of the sites, it was not clear that specific strategies were being pursued.

During the site visits, the issue of gaps in core animal science competencies was mentioned several times. Tanzania and Uganda were both very thin on the ground in terms of animal science capacity and as a result were heavily dependent on national researchers, universities and contract staff to handle nearly all of the demonstrations and trials. Ethiopia and Egypt had more technical scientists but there were imbalances leaving disciplinary gaps. The importance of addressing gaps in core competencies such as feed and animal health was identified in the expert survey as well. One competency gap mentioned in at least two sites was epidemiology. In the assessment of the evaluation team, the main core technical competency missing was expertise in on-farm research methodology.

Despite the comments received about the need to address gaps in core animal science competencies, it is not clear that this should be viewed as a top priority for new R4D positions. The technical flagship scientists seem to be doing a good job of supporting the value chains R4D work. Moreover, one positive effect of the program's understaffing is that national researchers have been actively engaged in principal roles from the start. As discussed below, this has been one of the best features of the program's value chains approach. The value chain teams working with their partners, with technical support from the flagships, are already working on animal science innovations assessment. A key question when considering competency gaps is: Which competency gaps are most significantly limiting capacity to implement a value chains R4D approach?

When the staff was asked whether disciplinary competencies for value chains work were okay, most of the staff agreed that competencies are okay. Of the staff who did point out areas where disciplinary competency should be reinforced, three competency areas were cited most frequently: innovation capacity, agribusiness and social science. Some also pointed out a need to increase the number of field based staff.

The SIP for the new VCTS flagship identified a somewhat different list of desired core competencies. The list from the SIP is shown below.

| Ground Unit in each VC | Shared SASI & Technology Flagships' staff |
|---|---|
| <ul style="list-style-type: none">- Economist (Jack of all trade type)- VCC / Finance and Insurance- Nutritionist- Animal health / Public health- Animal Husbandry- Gender Specialist- National Coordinator | <ul style="list-style-type: none">- Breeding/Genetics- Partnership- CapDev/OrgDev- Innovation systems- Consumption and Nutrition- Policy- Post-harvest system- Environment |

The VCTS vision, if and when addressed, would create competence in several areas that have been areas of relative weakness in the program's value chains approach, including practical economics, policy, environment, finance, post-harvest systems and consumption. While expanding competencies to address the above, including through partnering, should go a long way to better operationalizing a full systems approach to value chains, the most surprising omission is no reference to value chain or business development specialists at either the VC level or among the cross-site specialists from the other flagships.

During the site visits, the evaluation team found that the most urgent need is for much stronger business development perspective and experience. This omission from the VCTS SIP seems to reflect a misunderstanding of the most distinguishing feature value chain approach, which is building viable businesses and business relationships in agriculture. Without in-house business perspective and experience, including experience in designing and carrying out research on value chain business models, the likelihood of developing and validating strategies for improving the productivity and efficiency of value chains will not be particularly high.

Key Points, Recommendations and Working Suggestion

Key Points

- There appeared to be strong awareness of and commitment to the need for a multidisciplinary approach in animal science interventions.
- There were minimal or no inputs from economists for designing demonstrations and trials.
- There was not enough focus on the business side of things; and not enough in-house capacity in business economics and business development.
- Incentive and supervisory systems do not sufficiently reward multidisciplinary teamwork.
- There are gaps in core animal science competencies.
- Few of the scientists considered that the transactions costs thus far had been acceptable.
- The most urgent need for new complementary competency was stronger business development perspective and experience.

Recommendations

1. Establish core planning and implementation teams for each site of four to five scientists with complementary competencies; minimum time allocations should be 50 percent or more. [PM]
2. Ensure that priority is given to developing and testing strategies for integration of multiple interventions, addressing both institutional and technological aspects of integrated approaches. [VCC]
3. Reinforce business development competency and perspective. [VCC]

Working Suggestion

- § Ensure that there are inputs from economists in the design and appraisal of demonstrations [VCC]

8) How appropriate and effective has been partnership and stakeholder engagement?

This question was addressed by assessing the appropriateness of partnerships established with development organization, partner and stakeholder engagement processes and patterns, and progress made on developing and implementing effective communication strategies.

Partnership with Development Organizations

The cornerstone of the program strategy for converting research into developmental outcomes is establishing effective partnerships with development organizations. Review of program documents shows that reasonable progress had been made in forging partnerships with development organizations at nearly all sites. The table below summarizes some of the key partnerships cited in the 2013 annual reports. The table does not include partnerships and collaborations mainly related to research. The teams at most sites

also had collaborative activities with research organizations, universities, and public sector research and extension.

Table 10: Partnerships with Development Organizations

| | |
|--------------|---|
| Bangladesh | Codec and Speed Trust; Save the Children; several hatcheries |
| Burkina Faso | Heifer International |
| Egypt | CARE; several hatcheries; feed companies; Aquatic Union of Fisheries Cooperatives |
| Ethiopia | ILRI LIVES project; SNV |
| Nicaragua | Heifer International; several bilateral projects |
| Tanzania | SNV; Heifer International; Faida Market Linkages, Tanzania Dairy Board |
| Uganda | SNV, VEDCO; Heifer International; BRAC |

The findings in this sub-section focus on the development organization partnerships in the four sites visited, not program level partnerships and not partnerships in the five sites that were not visited. Given the importance of partnerships with development organizations, a number of issues were assessed, including: appropriateness, commonality of interests, performance, and sufficiency.

In all the sites visited, the teams had developed partnerships with developmental NGOs. Most partnerships appeared to be tactical, i.e. mobilizing support for implementation of the value chain approach. There were examples of more strategic partnerships such as the partnership with Care in Egypt, where Care leads more than half of the program activities. SNV was an important development partner in three of the sites. Heifer International and Faida Market Linkages seemed to be particularly key partners in Tanzania. BRAC representatives participated in meetings in Tanzania and Uganda but it did not appear that there were substantial collaborative activities with BRAC.

The development organization partnerships were quite appropriate. Care is not known as an agency that has worked on value chains development but Care has excellent experience for local level capacity development, which is the role Care is playing in Egypt. Most of the other development partners are NGOs with credible experience in business and value chain development support. SNV provides support for value chains development in several countries and is or probably soon will be a program level strategic partner. VEDCO has capacity and experience for providing training in farming as a business, developing farmer groups and associations, and supporting village saving association. Faide MaLi provides support on market linkages issues, information systems, and entrepreneurship skills. Heifer International has been involved in many aspects of value chains development.

All of the above development NGOs seemed to have strong interest in the value chains work of the program. The NGOs were bringing perspectives and expertise otherwise lacking in the program. There were enough comments during meetings and workshops to make it clear that there is a limit to the commonality of interests. The partner development organizations wanted a stronger focus on development and expressed some frustration at the continuing emphasis on research.

An important point to note is that the partnerships with development organizations were not operating in the manner characterized in program documents. Going back to the program proposal, one of the cornerstones of the program was that it was to serve as the knowledge partner to development organizations and actors. The extent to which this has happened appears to be negligible. The program has played an important and effective knowledge partner role vis-à-vis public sector research and extension officials, and to a certain extent to local and national public officials. The program has also had a knowledge partner function for local value chain actors, particularly producers. However, based on group and individual meetings with developmental partners, the developmental partners in the sites visited seemed to know at least as much about value chain development as did most of the program scientists. This was true for

development of animal-product value chains as well, at least for those developmental partners that were already actively working on animal source value chains.

For the most part, the value chain teams expressed satisfaction with the performance of their development organization partners. The point was made several times that these partners had proven experience for implementing the activities they were carrying out in the program. There were as well comments that delivery depended on the partner and was out of control of the teams.

While the value chain teams seemed satisfied with their partners, some of the descriptions given by the development organization partners on their approaches to value chains and capacity development were not completely convincing. It appeared that there was “pathway dependency” on approaches that are not necessarily state-of-art and are not likely to be sustainable or replicable without on-going infusion of funds from the program or through other donor agency funding.

On balance, the program’s commitment to and progress in establishing partnerships with frontline development organizations is one of the strengths of the program approach. The issue that was of greatest concern to the evaluation team was the glaring gaps in partnerships with development organizations having strong expertise in value chains development such as Technoserve or ACDI-VOCA. Even more important, none of the teams had established working partnerships with any of the many UN agencies such as FAO, ILO, UNIDO or ITC that have strong experience and knowledge related to value chains development. These UN technical agencies and other organizations such as GIZ could serve as knowledge partners on many aspects of value chains development to the frontline partners and stakeholders.

Partner and Stakeholder Engagement

Starting with the program proposal, the expressed intention was to engage a wide range of partners and stakeholders in R4D site implementation. The purpose was to ensure that the initiatives of the program were “firmly embedded within national country systems”, as recently reiterated in the VCTS SIP. The program proposal said that there would be a need for strong synergies and more fundamental roles for partners in order to establish the “effective partnering” needed.

During the evaluation, the term “partner” created quite some confusion. People at the R4D sites referred to everyone engaged even in workshops or surveys as being a partner except for the people perceived as being beneficiaries. Following this practice, the findings in this section do not distinguish between partners and stakeholders. The issue of concern is how effective the process of engagement with partners and stakeholders has been at the R4D sites.

The first part of the sub-section presents findings on the engagement processes at the R4D sites. The specific issue addressed is how satisfied are the partners and stakeholders with the program’s engagement processes. The second part of the sub-section gives findings on the patterns of engagement with different categories of partners and stakeholders, particularly focusing on engagement with local administrative and extension offices, national policy makers, and the private sector.

Engagement process

The central feature of the program’s engagement process has been to involve partners and stakeholders in all aspects of the value chains work at the R4D sites. Briefly recalling points noted in previous sections: partners and stakeholders were directly involved in consultations and decisions on site selection, implementation and review of the value chain assessments, and identification of best bet technologies. Partners and stakeholders had supported implementation of demonstrations and action research, in many cases taking the lead role at the local village and farm levels. Partners had participated regularly in strategy

development and planning meeting and had been called on to meet with cross-site staff and other program visitors, including the evaluation team.

The impression of the evaluation team was that the program's strong emphasis on engagement and partnering has succeeded in establishing a sense of shared ownership and partnership with the program's collaborators and stakeholders. It was clear from meetings with the partners and stakeholders that they recognized and appreciated the commitment made to involving them at all stages of program planning and implementation. This was confirmed by results of the stakeholder survey. During the wrap up workshops, particularly the participatory SWOT analyses, wide participation of stakeholders was identified in all of the sites as a major strength of the program's value chain approach.

While the partners and stakeholders clearly appreciated the program's commitment to partnering, they did identify several areas of concern and suggestions for further improvement. During the wrap-up workshops, the strengths and limitations of the program's engagement process was the issue that received the greatest attention. Six issues were raised most often:

- 1) While there is general understanding of the roles of the partners and stakeholders, the specific roles and expectations are not sufficiently understood. As was mentioned by one partner, the roles are "written with broad strokes". In a meeting in Ethiopia, one of the staff made the point that there was limited understanding of the motivations or capabilities of the partners. This appeared to be the case in the other sites as well. In Uganda, partners pointed out in the wrap-up workshop that they were unclear at times as to why they were "brought on board".
- 2) Periodic tension between the research and development agendas of the program was raised as an issue in three of the sites. In one wrap-up workshop the stakeholders said that the inclination of the CGIAR scientists for research had to a degree undermined the development component of the program. In one of the participatory SWOT analyses, one of the main threats was that the partners would start to lose interest if the program remains too focused on research. In meeting with the program staff, this divergence of interests was noted as well. Some staff acknowledged that it was not easy to get alignment between the priorities of the partners and the needs of the program.
- 3) Another concern expressed by the partners was slow progress and a corresponding loss of momentum. As stakeholders said in one wrap-up workshop, it often had not been clear what follow up there had been between meetings convened by the program. In one SWOT, the partners attributed slow momentum to poor delegation of work to other partners. At one workshop the question was posed: "Are we stakeholders or partners?" Two specific recommendations were made for accelerating progress and building momentum. One was to engage some of the partners in supporting networking with the other partners and stakeholders, sharing the work load for partnering. Another recommendation was to devote more resources for coordination of partners.
- 4) In Uganda, the point was made that there is a need for greater stability. It was noted that most of the partnerships are based on trust but this is not enough. It is important to have shared understanding and expectations about the purpose and nature of the relationship between the program and program partners. Developing memoranda of understanding with the partners was one of the recommendations coming out of the world café.
- 5) The need to streamline financial and contractual procedures with partners and service providers was raised by partners who had been contract service providers, including some of the development organization partners covered in the previous section. The long time that it had taken to get approval for memoranda of understanding was specifically mentioned.

- 6) In Ethiopia, one of the WCRD recommendations was the need to change the way the program does business with partners. The point was made that the program needs to empower the partners and move from a “consultative to appreciative relationship”. At the other sites, the partners and stakeholders also called for more fundamental roles of the partners in program decision making – including in planning and budgeting.

Some partners and stakeholders obviously wanted to have bigger roles and more responsibility but others said that the repeated calls for involvement in training, joint missions and workshops at all stages of implementation had been too much. There is not a single solution or model for all. As a general observation, it seemed that the program perhaps had asked too much of stakeholders on the periphery of program implementation, without making it sufficiently clear as to how this would benefit them. In other cases, the people more actively involved in program planning and implementation seemed to be frustrated that they were being treated pretty much the same as were the periphery stakeholders. They were ready to take more responsibility but they wanted to have more substantive program governance roles as well. As was indicated in the Ethiopia wrap up workshop, there is a need for “intelligent partnering”.

Engagement Patterns

The program had engaged most consistently and effectively with national researchers and decentralized administrative structures, such as the district offices in Uganda and Tanzania. National researchers were actively involved at all the sites visited. In Ethiopia and Tanzania, national researchers were playing particularly key roles. In Uganda, district veterinary officers were leading frontline action, particularly at the sites visited in Masaka. Local administrative offices were visited in Uganda and Tanzania and in both cases the officials were informed about the program and seemed to appreciate program interventions.

The teams had actively engaged with senior livestock sector officials in the ministries responsible for livestock and fish and, when different, the national research organizations. In Ethiopia, for example, the Director for Livestock in the Ministry of Agriculture confirmed that he had been participating from the beginning in planning, site selection and implementation. While the teams in all sites had made efforts to engage senior officials, it seemed when talking with some officials that they had only a cursory familiarity with program activities. This was particularly true in Egypt, where the political situation had been a major constraint. It was not possible during the short site visits to make informed judgment as to whether engagement with senior officials had received sufficient priority. It did seem though that there had not been sufficient engagement to create a foundation for influencing sector strategies and policies once evidence had been generated on policy options. At a minimum it would be fair to say that there is an opportunity to better promote the program at the senior level and to take steps to reinforce the sense of national ownership at that level.

In Uganda and Tanzania, there was strong engagement with the animal science departments of Makerere University and Soikoine University of Agriculture (SUA). During meetings at both universities, the senior people met said that there were strong complementarities with the program and the CGIAR more generally. At both universities, there had been joint supervision of students and was clear interest in continuing this collaboration. At Makerere, the point was made that universities are now more focused on adaptive research and outreach because of pressure to get funding. In Tanzania, Uganda and Egypt, university faculty participated actively in the wrap up workshops.

During the visits to Makerere University and SUA, the evaluation team met with representatives of the departments responsible for agribusiness as well. These meetings showed that the program had not engaged nearly as actively with agribusiness as it had with the animal science departments but there were strong opportunities and partner interest in strengthening engagement related to agribusiness research. Both universities had competencies in agribusiness currently lacking in the program.

The engagement of the program with the private sector was mainly with producers and local input suppliers and traders. The farmers had been engaged in group meeting, as survey respondents and as collaborators in the program's demonstrations and action research. In Tanzania, Ethiopia and Uganda, the program was working with and through farmer groups – many of them reinforced and reinvigorated through support provided by the program. In Egypt, the program had helped to form and was supporting groups of women retailers.

Other than involvement in meetings and workshops, there had not been much engagement with commercial value chain actors such as Fresh Cuts in Uganda, TangaFresh in Tanzania, and Luna Abattoir in Ethiopia. There clearly were additional opportunities for engaging in a more substantive manner with a number of relevant commercial enterprises. Engagement with commercial value chain actors was stronger in Egypt than in the other sites but mainly for seed dissemination of the improved Abbassa strain of Tilapia, which was entirely based on private sector action.

The program had engaged with private sector associations but, again, mainly or only through workshops and meetings. In Tanzania, both the Tanzania Milk Producers Association and the Tanzania Milk Processors Association had been participating in meetings and workshops under the umbrella "Maziwa Zaidi" initiative. Private sector associations had been invited to meetings in the other sites as well. In Egypt, the program had engaged the Union of Aquatic Cooperatives as the institutional host for the aquaculture sector multi-stakeholder platform.

Based on the site visits and review of documents, it seems clear that the value chain teams need strategies for more substantive engagement with private sector actors and associations – particularly in Ethiopia, Uganda and Tanzania. This is not only the view of the evaluation team. Design of a strategy to engage the private sector was one of the recommendations coming out of the WCRD in Uganda. In both Ethiopia and Tanzania, one of the key limitations on the program approach identified during the WCRDs was lack of sustained engagement with private sector partners. During the teleconference with value chain development thematic scientists, they said that there had not been much success in partnering with the private sector. The need to give more attention to private sector partners was pointed out in the expert survey as well.

While partnering with the private sector was somewhat at the margin of program strategies in Tanzania, Uganda and Ethiopia, it seemed from program documents that greater attention had been given to the private sector (including formal cooperatives) in Nicaragua, Egypt, and Bangladesh. It is not clear whether this difference is attributable to sector circumstances or to differences in philosophy and approach of the partner centers.³⁵ Regardless, it would be beneficial to the value chain teams if there was program-level clarification of strategies and priorities for substantive engagement with private sector actors beyond producers and local service providers.

One other area in which engagement seemed relatively weak in the sites visited was with relevant regional institutions and initiatives. For East Africa, relevant regional institutions include, among others, the AU, ASARECA, EAC and the EAFF. Examples of relevant regional initiatives include the EAC's EA3DP and the WEF's Grow Africa. In discussions with program staff, there seemed to be little awareness of the roles these institutions and initiatives are playing and can play in value chain upgrading and scaling.

There was surprisingly little engagement with any of the UN technical agencies even though several have been very actively involved in developing, validating and promoting the value chains approach, including ILO,

³⁵ In general, it appeared that WorldFish and CIAT might have a somewhat stronger focus on engagement with the private sector than do ILRI and ICARDA, although this could well reflect differences in opportunities in the value chain countries for the target species.

UNDP, FAO, IFAD, ITC and UNIDO.³⁶ In the countries visited, FAO and IFAD were providing support in East Africa for value chain development related to some of the target species.

To summarize, stakeholder engagement has been a strong element of the program's value chain approach but has not always been as comprehensive or effective as it might have been. However, stakeholder engagement is a challenging area. Higher level, inclusive and substantive engagement and partnering are resource hungry and often impede efficient implementation and delivery of program outputs. More selective and limited engagement runs the risk of alienating potentially important and relevant stakeholders and value chain actors. The value chain teams will no doubt continue to struggle to get the balances right. In general, it would seem that some rebalancing is needed to enhance engagement with various segments of the private sector, senior officials in a position to influence sector strategies and policies, agribusiness faculties in national universities, regional institutions that will be particularly important in efforts to support scaling, and relevant UN technical agencies with strong experience in different elements of the value chains approach.

Communications

The intention of the program has been to establish a communications strategy and capacity to reach decision makers and investors. Communications, in this specific context, is an important element of the program's strategy for partner and stakeholder engagement and for scaling.

Based on documents review and the site visits, it did not seem that a lot of progress had yet been made in developing and implementing communication strategies at the level of the R4D sites. Whether sufficient progress had been made at the broader program level is an issue for the IEE, not this evaluation.

At the sites visited, communications was point of emphasis in Uganda for both the value chains team and the partners. The team had recently recruited a person to reinforce its communications capacity. Nevertheless, during the wrap up workshop in Uganda, one of the world café recommendations was to further improve communications. Some specific suggestions made by the partners included: (a) simplify language, (b) better involve local media, (c) budget for dissemination of results, and (d) work on publicity to rope in private sector partners and investors.

The extent to which improved communications had become a point of emphasis at other sites was not clear from the documents review, with the exception of Nicaragua. The Nicaragua annual report for 2013 stated that improving communication with farm level beneficiaries was a point of emphasis. Presumably this will be the case for all the sites where it is not already the case because communications is a program level priority. The key will be to identify an appropriate balance between scientific and program reporting and communications targeted to partners, value chain actors including farmers, and the broader public.

Key Points, Recommendations and Working Suggestions

Key Points

- The program's commitment to and progress in establishing partnerships with frontline developmental organization is one of the strengths of the program approach.
- The emphasis on engagement and partnering had succeeded in establishing a sense of shared ownership and partnership.
- There were some tensions with developmental NGOs because the partner organizations wanted a stronger focus on development.

³⁶ There had been contacts and exchange of information, and in some cases representatives of UN agencies were invited to participate in program workshops. However, there were no indications that UN value chain specialists were actively involved as program partners.

- The value chain teams need to accelerate action, focus more on research related to value chain upgrading, streamline financial and contractual procedures, and give core partners more fundamental roles in program decision making.
- There were glaring gaps in partnerships with international NGOs and UN agencies that have strong experience and knowledge for supporting value chains development.
- Other than involvement in meetings, workshops and periodic site visits, there had been little engagement with commercial value chain actors.
- In the sites visited, engagement was weak with relevant regional institutions and initiatives.
- There has been limited progress and insufficient investments in communications and advocacy.

Recommendations

1. Develop agreements with two or more strategic knowledge partners to support innovation on value chain development approaches and quality-assure the performance of country-level development organization partners. [PM]
2. Develop strategies for engaging private sector³⁷ actors and associations in identifying and assessing strategies for private sector services provision and business models linking producers to processors. [VCC]

Working Suggestions

- § Clarify strengths and limitations of the program as a knowledge partner to developmental actors. [PM]
- § Accelerate or launch assessments of the organizational landscape at the national and sub-national levels, followed by clarification of partner roles, strengths and incentives. [VCC]
- § Develop a differentiated partnering and engagement strategy – with a core group of full partners working within a broader set of collaborators and stakeholders. [VCC]
- § Promote the program at the senior policy level and to take steps to reinforce the sense of national ownership at that level. [VCC]
- § Accelerate plans to reinforce R4D level communication strategies and capacities. [VCC]

8.3. Outputs to Outcomes

This part presents findings on the four remaining evaluation questions:

- What progress has been made in technological and institutional innovation?
- What progress has been made in value chain upgrading?
- What are prospects for scaling?
- What are prospects for achieving progress on the IDOs?

9) What progress has been made in technological and institutional innovation?

The main technological innovations being assessed were identified in the sub-section above on “Follow-Up Research Agendas”. The table below summarizes the main institutional innovations being assessed at the R4D sites.

³⁷ Through the evaluation, the term “private sector” is used to refer to all people and enterprises involved in commercial and semi-commercial activities such as producers, inputs suppliers, transporters, traders, processors, wholesalers, retailers, exporters, etc. The term does not include public sector and non-profit organizations.

Table 11: Institutional Innovations at R4D Sites

| | |
|-----------|--|
| Egypt | Women retailer organizations – 6 retailer groups formed and supported |
| | Innovation Platform – launched early 2014; six working groups formed |
| Ethiopia | Mobile technology – for timely collection, analysis and delivery of breeding data |
| | District level multi-stakeholder platform – pilot with LIVES Project |
| | Farmer cooperatives for collective action |
| India | Innovation Platforms (IP) promoted as part of the MilkIT project |
| Nicaragua | Sustainable livestock farming platform – built on existing platforms |
| | Incentive schemes to meet international quality standards |
| Tanzania | Dairy market hubs revolving around check-offs provided through traders |
| | Dairy market hubs revolving around chilling plants or through transport arrangements |
| | Village innovation platform - farmers and other stakeholders; five sub-committees |
| Uganda | Multi-stakeholder platform – first meeting 19 August 2014 |
| | Common slaughter slabs |
| | Market hub model |

This section briefly reviews the innovation areas where the greatest progress had been made, whether the innovations are specifically pro-poor and gender responsive, and how progress compares to plans.

There had been some progress on appraisal of innovations at six of the R4D sites, including Bangladesh, Egypt, Ethiopia, Nicaragua, Tanzania and Uganda.

In Bangladesh and Egypt, the focus had been primarily on technological innovations. The Bangladesh site had made progress on the improved GIFT strains of Tilapia, genetic selection of Indian carp and new milt bank technology. There did not appear to be progress on institutional innovations. The team in Egypt had made progress on improvement of Nile Tilapia. There had been progress in Egypt on institutional innovations, notably support for women fish retailers' groups and a national Innovation Platform related to aquaculture.

In Ethiopia, some progress had been made on both technological and institutional innovations. With respect to technological innovations, there had been progress in sheep and goat breeding programs. The improved goats and sheep were, according to producers, getting premium prices in local markets. There was also progress on forage development in conjunction with the LIVES project. A pilot multi-stakeholder platform had been launched, again with LIVES, and a recording and data management system to support village-based breeding programs was being piloted. The program had continued to support and appraise the performance of community breeding programs.

In Nicaragua, progress had been made in identifying improved forages (grasses) for waterlogged soils. The Nicaragua team had also provided support for a sustainable livestock farming platform and was assessing incentive schemes to meet international quality standards.

In Uganda and Tanzania, there had been more progress on institutional innovations than on technological innovations. In Uganda, there had been assessment of the use of sweet potato residues for pig feeding. The team had supported the launching of the Uganda Pig Stakeholders Platform. Some progress had been made

Progress on Pro-Poor Innovations

Large percentages of the staff and stakeholders were neutral or did not know enough to assess the program's progress in identifying pro-poor and gender responsive innovations. Among those that did express a view, large majorities of both staff and stakeholders agreed that the program had identified pro-poor innovations and strategies for improving essential services.

on introduction and assessment of common slaughter slabs and hub marketing models. The greatest progress on technologies in Tanzania was appraisal of forages for dry season feeding. Progress on institutional innovation included assessment of various dairy hub marketing models and village innovation platforms. The team had continued to participate in and support the Dairy Development Forum.

Looking across all the sites, there was relatively minimal progress on technological innovations except for work on innovations that had been underway before the program started. There is no way to attribute the technological progress made thus far only to the program, and certainly not to the program's value chains approach. This really does not matter that much since the program was designed to build on "existing momentum". Not unexpectedly, the extent to which there had been progress in introducing and assessing technological innovations was completely correlated with previous, on-going research and technology development. The R4D site teams had built on previous work and as a result had started to make modest progress in identifying and assessing innovations. The notable exception to this generalization was the progress on improved genetics in Egypt and Bangladesh; progress was advanced and still moving forward.

Most of the progress on institutional innovations at the various sites can be attributed to the program. The main institutional innovation being focused on at the visited sites was multi-stakeholder platforms. The teams in India and Nicaragua were also working on multi-stakeholder platforms. In Nicaragua, emphasis had been given to identifying and building on existing platforms. In India, the program had continued to promote and reinforce innovation platforms set up under the MilkIT project.

The pig and aquaculture platforms set up in Uganda and Egypt are intended to be organizing platforms for all stakeholders in the target sector. Both platforms have the potential to link into and support sector strategy and policy development. Given that there are important sector policy issues impacting on value chains development in both countries, support for the further development and institutionalization of the platforms would appear to be priorities for on-going program support.

In Ethiopia and Tanzania, the circumstances were different for the platforms but also promising foci for value chains work. The DDF in Tanzania was not set up by the program even though the program is providing important support for the platform. The DDF is linked to the Tanzania Dairy Board, which has statutory oversight responsibility for dairy sector development. In Ethiopia, the government was in the process of setting up a multi-stakeholder platform for the livestock sector. The program has an opportunity to be a key participant and supporter. In both countries, the platforms are or will be national institution led platforms. Platforms that are national institution-led could well attract and sustain the interest and active participation of a wide range of stakeholders.

The other institutional innovation that had received a lot of attention was group formation and strengthening, including in Ethiopia, Uganda, Tanzania and Egypt. Support for group formation and strengthening has been very common in value chains development programs. Indeed, group formation and strengthening has been a standard first step in provision of support at the local level for decades. A tremendous amount of information is available on lessons and good practices. Before the value chain teams go too far in supporting specific approaches to group strengthening, it will be important to familiarize themselves with lessons learned. As with multi-stakeholder platforms, there are some ways to strengthen groups that are more viable and sustainable than others. One bad practice is to encourage groups to take on functions that are beyond the capacities and time available to group members. This is particularly important to keep in mind in value chains work. Many producers do not trust inputs suppliers and traders and a "knee-jerk" reaction is to help farmers build up their own collective capacities to take on input supply and trading functions. While there are examples where farmer collective action works, the prospects for developing efficient and productive value chains generally are greater by focusing on upgrading the capacities of input dealers, producers, traders, processors, transporters and retailers and improving information flow,

coordination and alignment among the value chain actors – rather than trying to shift multiple value chain functions to the producers.

The locations where the value chain teams were working are in areas with high poverty levels. Moreover, the best bet interventions had been selected because they were seen as being appropriate for poor producers. In this sense, essentially all the technological and institutional innovations receiving the greatest attention at the R4D sites are pro-poor, although most of the innovations should be relevant to other smaller scale producers as well.

The genetic improvement programs in Bangladesh and Egypt are not pro-poor targeted although the productivity gains could well help poor consumers. Moreover, in both countries, there had been complementary pro-poor targeted actions. In Egypt, these included work with women retailers and piloting of fish farming in Upper Egypt. The team in Bangladesh had provided training and technical support to poor producers and had provided support to local feed mills to improve access to feeds for farmers in remote areas.

The work on forages and residues in Nicaragua, Ethiopia, Uganda and Tanzania was not specifically pro-poor targeted but, again, most of the producers in the target zones are poor and the innovations were, for the most part, compatible with the resource limitations of poor producers. Richer farmers have better capacity for purchasing feed available on the market and do not depend on local, self-help solutions. The national level multi-stakeholder platforms are not specifically pro-poor but again should lead to benefits for poor-producers.

The hub models in Uganda and Tanzania, community slaughter slabs in Uganda, and community breeding program in Ethiopia are all very much pro-poor targeted producer innovations. There do not appear to be any innovations at any of the sites that are pro-poor consumer targeted.

The only innovation that is specifically gender responsive is the work on women retailers in Egypt. However, as was the case with spatial targeting, the selection of the target species had already ensured, to a large extent, that the innovations work of the R4D site teams is gender responsive. The extent to which this is true should be, and undoubtedly will be appraised as work continues on the best bet technological and institutional innovations.

The only way to assess progress compared to work plans is the information provided in annual reports. According to the last annual report, progress was pretty much as planned on identification of innovations. This is because the plans through 2013 for most of the teams focused on assessment, strategy development, partnership building, and launching follow up action research. The reports for Bangladesh, Egypt, Tanzania and Uganda indicated that progress was pretty much on track. The dissemination, training and piloting work was on schedule in Egypt but the policy level work was delayed by political instability. The Ethiopia site report indicated that progress was slower than planned due to limited funds and recruitment delays but that there had been progress on the three planned areas of technological intervention. The Nicaragua report indicated that they had not been able to fully meet 2013 deliverables.

Based on review of the reports, it appears that the assessment of progress relative to work plans was more self-critical by some teams than by others. Not surprisingly, progress against plans seemed have been greatest where there was a core bilateral funded project to finance program activities. Progress was also greatest in sites where research had been most advanced before the program started, such as the WorldFish sites. Progress was in general greater on institutional innovations than on technological innovations, in part because these were logical follow up interventions in the context of the program's partner engagement and participatory processes.

The key issue, however, is not progress against plans. As was pointed out by the partners and stakeholders, the real challenge is to accelerate progress on innovations validation and capacity building for value chains upgrading. The next round of plans should make it clear that the teams have rebalanced to focus on research related to innovations assessment, upgrading and scaling.

Key Points, Recommendations and Working Suggestions

Key Points

- Overall, there had been little progress on validating the potential of innovations.
- Progress was greatest in sites where research had been most advanced before the program started.
- Technological and institutional innovations receiving the greatest attention were pro-poor, although most of the innovations should be relevant to other smaller scale producers as well.
- There is a need to focus more on strategies and approaches for business development along the value chains.
- There is a need to learn more (from the literature) about the innovations being assessed.

Recommendations

1. Accelerate action research on innovations right away for credibility with partners and prospective donors. [VCC]
2. Ensure that research on innovations is designed and implemented in a way that makes it possible to test a range of different strategies. [VCC]

Working Suggestions

- § Maintain an inventory of the innovations being worked on at all sites, including information on factors that influence success or not. [PM]
- § Develop guidelines on the potential for and limitations of business development in groups; and alternative approaches for business organization and management. [PM]
- § Develop guidelines for assessing the feasibility, sustainability, efficiency and quality trade-offs between business and public sector supplied services. [PM]
- § Develop guidelines for assessing the poverty implications of different technological and institutional innovations in a more systematic way. [PM]
- § Ensure that the teams do not over-invest in location specific adaptation. [VCC]

10) What progress has been made in value chain upgrading?

According to the Livestock and Fish theory of change, upgrading in the target value chains will be achieved primarily through enhanced capacity of development partners to deliver (tested and refined) innovations, enhanced capacity of value chain actors, and mobilization of funding for large scale development interventions. Although not indicated in the program's theory of change, upgrading in the target value chains can also result from the piloting and assessment of innovations as evidence is generated on how innovations lead to improved value chain performance. The first part of this section summarizes findings on where there had been the greatest progress in value chain upgrading – through capacity development, mobilization of funding and/or technology introduction.

Main Contributions to Upgrading

Training provided to producers had been the main contribution of the program to value chain upgrading. Producer training courses had been developed and delivered in most of the active sites. The following table gives a summary of the training provided to producers.

Table 12: Training Provided to Producers

| | |
|------------|--|
| Nicaragua | Good practices on soil fertility management and improving silvo-pastoral systems |
| Nicaragua | Farmer training on dairy processing, focused on quality of dairy products |
| Egypt | Best Management Practice training – 10 subject areas; 1,800 fish farmers |
| Bangladesh | Training and advice on improved shrimp and fish farming; 100,000+ households |
| India | Milk producers training on practices for maintaining quality and hygiene; 800+ |
| Uganda | Pig farming practices; 70 |

In addition to training, most teams had provided technical support and inputs to producers in conjunction with demonstrations and innovations assessment. During the wrap up workshops, program partners and stakeholders identified capacity development as one of the main strengths of the program.

While most training activities had been targeted to producers, some of the teams had provided training to other value chain actors as well. In Bangladesh, for example, training had been provided to nurseries, traders, and hatchery owners. In Egypt, training and technical support had been provided to women retailers. In Uganda, support had been provided to groups piloting community slaughter slabs.

In addition to training provided to the value chain actors, there had been significant investment in building capacities of program partners for implementing a value chains approach at most of the R4D sites. Training had been provided, for example, on value chain and feed assessment tools, how to adapt and use value chain assessment tools for specific value chains, use of VCA results to identify best-bet interventions, how to manage feedback sessions with farmers, benchmarking, and system dynamics modeling. Training was also provided to program partners and collaborators on a number of technical topics including: feeds, food safety, small ruminant genetics and breeding, and data recording and management systems for genetic improvement. This training had benefited national research and extension officers, in particular. While this training did not directly contribute to improved value chain performance, it was an investment in capacity for future upgrading.

The only technologies introduced at sufficient scale to directly contribute to value chain upgrading at scale were the improved strains of Tilapia in Egypt and Bangladesh, and carp in Bangladesh. The continued development and dissemination of the improved Tilapia strains, in particular, had led to rapid benefits for producers, although the wider impacts on the value chains had not as yet been explored.

There had been many small contributions to value chain upgrading as a result of the pump priming assistance to collaborators involved in innovations assessment. In Egypt, for example, the women retailers had been provided with ice boxes, motorized tricycles and grills. In Ethiopia, producers in the community breeding program had been provided with forage seed and free vaccinations. It is a bit uncomfortable to include pump priming inputs and services as contributions to value chain upgrading but the beneficiaries said that their productivity and incomes had increased as a result of the support provided. Unfortunately, this type of support for value chain upgrading is

Progress on Upgrading
Less than a quarter of the staff agreed that (a) realistic strategies had been developed for mobilizing resources for upgrading, (b) appropriate strategies had been developed for capacity development, or (c) levels of resources committed to capacity development had been sufficient. However, most staff and stakeholders were neutral or did not have enough information to judge.

Capacity Development
Most staff and stakeholders agreed that the program had contributed to improving capacities of value chain actors and to improved value chain coordination.

neither sustainable nor scalable. In the context of Livestock and Fish, this upgrading is simply a spillover benefit of value chains R4D.

In the program proposal, a cornerstone of the program strategy for upgrading (and scaling) was to generate evidence through innovations assessment to mobilize resources for large scale development interventions. While some of the value chain teams had succeeded in securing significant bilateral funding to support program activities, including in Nicaragua, Bangladesh, Uganda and Tanzania, the resources mobilized were primarily for implementation of value chain R4D, not for development interventions and value chain upgrading. A small share of the funds mobilized did, however, directly support value chain upgrading (through the technology dissemination, innovations assessment and piloting, and training of value chain actors mentioned above).

Other Support for Value Chain Upgrading

Even though Livestock and Fish is a research program, it has actively engaged development partners and value chain actors in the value chains work of the program. As indicated above, both developmental partners and value chain actors want Livestock and Fish to make greater contributions to value chain upgrading. These aspirations can and should be met even without waiting until large scale development funds can be mobilized. There are at least three additional areas of support for value chain upgrading that should receive more attention even in the light of the R4D mandates and resource constraints under which the value chain teams are operating.

One of the main contributions most value chains development programs make to value chain upgrading is support for value chain coordination. The program value chain teams have engaged actively with actors all along the value chains but had not as yet focused attention specifically on support for value chain coordination. Nevertheless, even in the context of local market systems, there are opportunities to improve producer cooperation and coordination with local traders, transporters and input suppliers. One very simple example, from Ethiopia, would be to strengthen coordination between farmers able to grow forage seed and sheep producers in the highlands that need forage seed. There were many opportunities for supporting coordination between feed suppliers and specific producer groups. Some of the justifications for investments improving value chain coordination even in a R4D program are:

- Resource requirements for improving value chain coordination are relatively small but can pay big dividends in terms of helping the value chain teams, partners and value chain actors to better understand the feasibility and distributional impacts of innovations
- Improved coordination along value chains directly improves capacities of the value chain actors for upgrading (which is a transmission mechanism in the program's theory of change)
- There are different approaches for improving value chain coordination; these should be assessed in value chains R4D because of the importance of value chains coordination for value chain upgrading

During the site visits, it was clear many sector policies and regulations were having significant impacts on the efficiency and productivity of the target value chains. One example was the restriction on where aquaculture ponds could be located in Egypt, along with restrictions on what water could be used for ponds. The need to address policy constraints was one of the main recommendations coming out of both the SWOT and the world café during the wrap up workshop in Egypt. In Ethiopia, Uganda and Tanzania, concerns were expressed about the quality of vaccinations and the need for better quality control systems. In Tanzania, small-scale milk collectors and processors complained about the lack of enforcement of milk safety regulations – which was giving a clear cost advantage to informal sector milk traders. The value chain actors in Uganda all complained about the lack of attention and support to the pig sector.

The program had set up or was supporting platforms in several countries with the intention that the platforms eventually influence sector strategies and policies. Overall though, there did not appear to be sufficient investment in appraisals and communications to support advocacy for policy and regulatory changes that might quickly lead to value chain upgrading. The value chain teams could make a start on this by investing time in reinforcing relations with senior policy makers who have the influence and power to make a difference in sector policies and regulations. As was indicated by program partners in one of the world cafés, “failure to address governance of sector is a major limitation of approach.” While engagement in policy advocacy can be viewed as going beyond the scope of a R4D program, the value chain teams have a responsibility to support their partners and the value chain actors in securing necessary changes in policies and regulations that are impacting negatively on value chain performance and distribution of benefits.

Contributions to the Private Sector

Less than 20 percent of the staff agreed the program has helped to improve private-sector provision of services, and less than 15 percent agreed that the program has helped to improve the value addition and efficiency of small and medium scale agro-processing enterprises. Program stakeholders had more positive views. Half agreed that private sector provision of services has improved as a result of the program.

Based on program documents and the site visits, no support had been provided for upgrading of micro, small and medium scale enterprises. This is quite unusual for value chains development programs and appeared to be an opportunity lost. In all the countries visited, there were needs and opportunities for upgrading support to pre- and post-production enterprises. The program should invest in building the capacities of micro and small scale entrepreneurs and help them to develop viable business plans. The program could also engage appropriate knowledge partners for assessing technological and institutional innovations by MSMEs, as a complement to the CGIAR partners are providing at the production stage of value chains.

Increased support for and engagement with MSMEs almost certainly would help mobilize private investments for value chain upgrading and scaling. While the levels of investment mobilized in this manner might not be much compared to the funds that can be mobilized from donors, these investments could improve private-sector provision of services to poor producers and lead to efficiency gains all along value chains, thereby benefiting poor-consumers. Equally important, lessons learned through program support for MSMEs could point to market linkage and service-provision models that do not depend heavily on public sector and donor funding for replication for scaling.

Key Points, Recommendations and Working Suggestions

Key Points

- The main contribution to value chain upgrading had been training provided to value chain actors and program partners.
- There had been some upgrading as a result of spillovers from the assessment of innovations.
- The program had not yet mobilized significant funding for value chain upgrading and scaling.
- Additional priorities for upgrading support are: value chain coordination, policy engagement and advocacy, and upgrading of MSMEs.

Recommendations

1. Increase program support for value chain coordination, policy engagement and upgrading of MSMEs. [PM, VCC]
2. Ensure that support for multi-stakeholder platforms is paired with research on effectiveness, transactions costs, core roles and potential services. [VCC]

Working Suggestions

- § Develop guidelines on conditions and timeframes for pump priming subsidies. [PM]
- § Engage more with commercially-oriented SMEs (and even larger companies) for identifying and assessing VC upgrading strategies and mobilizing resources for value chain upgrading. [VCC]

11) What are prospects for scaling?

The prospects that interventions identified by the program might go to scale within the R4D countries and in other countries, depend on four main factors: (a) whether the innovations identified are amenable to scaling, (b) evidence on benefits, (c) whether issues necessary to ensure uptake have been identified, and (d) whether the strategies and mechanisms to support scaling are realistic. This section presents findings on these issues.

Amenability to Scaling

In Egypt, scaling is already taking place at a significant level for some project components, thanks to an effective seed dissemination strategy and training of trainers for best management practices. Scaling is also underway in Bangladesh for the same reasons. In general, genetic improvement innovations are relatively easy to scale if clear strategies are in place for dissemination and if the performance of the genetic material is not too strongly affected by specific production environments. Innovations in other countries focused on identifying appropriate feed, feed supply systems, and forages should not be too difficult to scale at least within agro-ecological zones.

For the most part, however, the value chain teams appeared to be working on innovations that are not particularly amenable to scaling. On the technology side, this is because of the emphasis has been on finding local solutions for breeding and feeding based on existing resources. The investigation focused on feeding of sweet potato residues in Uganda is an example. The main institutional innovations will also be hard to scale, including community based group action and local level innovation platforms. The national level platforms already had been operating at scale but do not directly support scaling in new countries.

Because most of the innovations being worked on are community based and context specific, scaling will require facilitation, technical support, capacity development and adaptation in each new location. This means that scaling will mostly depend on replication, which in turn means that scaling for most of the interventions will depend on public sector, donor agency and development organization interest. The hope of reducing dependency on public resources and action was one of the main reasons the value chains approach became popular. At least to this point, most of the innovations the value chains teams are working on cannot be expected to go to scale as a result of market dynamics and responses of value chain actors.

Evidence on Benefits

Scalability had been fairly well researched for the genetically improved fish seed in Egypt and Bangladesh. Otherwise, appropriate, convincing evidence had not been generated on other innovations being worked on by the value chain teams. This mainly is because the teams had only recently transitioned to an increased focus on innovations assessment. It is also because the approaches for innovations assessment were overly dependent on feedback and observations rather than measurements, data and models. There is a need to improve methods for assessing both institutional and technological innovations, as was indicated above.

The challenge of generating appropriate evidence on the benefits of innovations goes beyond measurement of benefits in action and adaptive research. Evidence on the potential benefits of innovations needs to address broader sector and value chain contexts and dynamics as well. As one of the experts pointed out, evidence needed to support scaling must include information on what is likely to work and under what

conditions. Information is needed on how innovations address specific felt needs by specific value chain actors since those actors will be the ones eventually taking the decision to adopt and adapt or not. Information is also needed on the investment costs needed to promote and support scaling in new areas. In many cases, it is the cost of promoting and supporting replication that prevents replication and scaling, not the level of benefit per value chain actor.

As both stakeholders and experts pointed out, the right evidence to support scaling is not only or even primarily scientific evidence. For well over a decade, the UN Economic Commission for Asia and the Pacific promoted “success case replication” to support replication and scaling. Through the approach, successful innovators were co-opted to go to new areas and explain what they did and why in order to succeed. Even without resort to success case replication methodology, the program needs to take advantage of the fact that success does breed replication. Evidence should be generated on success cases and prepared in appropriate language and formats to bring to the attention of policy makers, other value chain actors, development organizations, donors, and even the general public. The program clearly recognizes this but it is not clear that the value chain teams have strategies for ensuring that they generate the type of evidence that supports the various communication formats the program has developed to promote and popularize findings and success stories.

Issues to Address

Generating the right evidence must start with clear understanding of the range of issues necessary to ensure uptake of innovations. Three of the main drivers for uptake of innovations are market dynamics and access, access to appropriate support services, and enabling policies. In addition, as one expert said, important issues affecting uptake include “market linkages and market-based incentives, business rationale throughout, effective communications, effective demonstrations and championship.” These all are key issues that need to be addressed, or at least understood, to promote and ensure uptake of innovations.

Given that the program is at this point focusing on value chains where market linkages and private sector services are relatively weak, the value chain teams need to identify and address issues influencing the strategies and priorities of national governments, regional organizations, donor agencies and foundations, and international financial institutions. For example, specific benefits to poor women or to youth might be an issue of particular concern to some donors; other donors might well be most interested in employment generation. Governments might be particularly interested in urban food prices or poverty reduction in certain parts of the country.

There are at least three additional “mainstream” value chain issues that need to be addressed in order to assess prospects and mobilize resources for scaling:

- 1) The real net benefits associated with interventions and conditions that might further enhance or reduce returns. This can be complicated because technical interventions may have knock on effects in terms of industry structure and employment. It is also complicated when addressing public and non-profit investors since, as mentioned above, promotion and support costs per beneficiary should be considered.
- 2) The competitive advantage of specific value chains for the target species compared to other value chains for the same species and final products, and other value chains for other commodities and products. The competitiveness the program’s pro-poor value chains compared to other chains is likely to be a particularly important issue for financial institutions and the ministries of finance at the national level.

Scaling

The staff was evenly divided on whether the full range of issues necessary to ensure uptake of interventions had been identified, and whether realistic strategies for scaling up and out had been identified; with 1/3 neutral on these issues. Many of the stakeholder respondents were neutral on these statements as well.

- 3) Any support for business and value chains development must be couched in business terms, i.e. reliable access to inputs and equipment, product quality and safety, operational efficiency, logistics, specific end buyers, compliance with market standards, etc. In brief, a key issue even for governments and donors, not to mention financial institutions, is whether there is a sound business cases for value chain models and integrated animal science packages.

Strategies and Mechanisms for Scaling

Of the sites visited, only Egypt had a clearly articulated strategy and associated mechanisms to support scaling, and this was only for some the program's innovations. The other innovations in Egypt were piloting activities. In Ethiopia, Uganda and Tanzania, the main strategy for scaling was to pilot innovations and mobilize development partners and the governments to support replication. In Tanzania, Uganda, and Egypt, national multi-stakeholder platforms were seen as critical for mobilizing support and creating enabling conditions for scaling.

Most respondents to the staff survey indicated that the main mechanisms for supporting scaling were strong partnerships and generating evidence on the benefits of innovations. Both are very much in line with the overall program strategy for supporting scaling. Some pointed to the need for appropriate and effective communications, while a few others noted the need for effective implementation and structured learning. Perhaps somewhat surprisingly, only two respondents noted the need to identify the right market circumstances where value chain actors would benefit from value chain upgrading.

The value chain teams should reinforce their understanding of essential requirements and enabling conditions for scaling, drawing on lessons from the value chain literature, and then use this information to develop more comprehensive and realistic scaling strategies. Some illustrative components of these strategies might include:

- 1) For the three programs in East Africa, link up with regional organizations such as ASARECA and EAFF in order to support exchange of information and strategy development for research directed at helping poor producers. There are analogous regional farmer federations and research networks the other R4D sites could engage in dialogue, information and actions to support scaling.
- 2) Engage in regional initiatives – such as the EAC's East Africa Agro-Enterprise and Agro-Industries Development Program (E3ADP) – that were specifically designed to attract investment financing for business and value chains development.
- 3) Assuming the program eventually identifies innovations that increase the attractiveness of poor producers as suppliers, engage small, medium and larger scale traders, processor and exporters in supporting upgrading because it is in their interest to do so.
- 4) Develop demand-response facilities at the program or national levels to provide injections of technical support on validated technological and institutional innovations to already existing projects and programs in the target countries and in other countries.
- 5) Engage with the sector and value chain development initiatives of private sector associations and foundation, such as the World Economic Foundation's Grow Africa initiative, providing specialist expertise on pro-poor upgrading strategies for animal value chains.

The above are only the result of quick brainstorming. The point is that current strategies seem to over rely on a limited set of mechanisms that might well not be sufficient.

Key Points, Recommendations and Working Suggestions

Key Points

- There had been insufficient attention to the future scaling potential of innovations.
- Most innovations were not amenable to scaling other than through replication.
- Prospects are low that most innovations will go to scale as a result of market dynamics and private sector investment.
- The teams had not yet generated convincing evidence on any of the innovations being worked on.
- There was a lack of articulated strategies and mechanisms for scaling.
- There is a need to strengthen private sector collaboration in order to lessen future donor dependency.

Recommendations

1. Develop realistic scaling strategies that identify mechanisms, essential requirements, assumptions and enabling actions.
2. Ensure that evidence is being generated to establish sound business cases for public and private sector investment in value chains for the target species and integrated animal science packages. [PM]

Working Suggestions

- § Clarify and take into account the strategies and priorities of national governments, regional organizations, donor agencies and foundations, and international financial institution. [PM, VCC]

12) What are prospects for achieving progress on the IDOs?

The findings in this section focus on two issues: (a) the balance in attention to the intermediate development outcomes,³⁸ and (b) prospects for making progress on the IDOs.

Balance in Attention to the IDOs

All of the active value chain teams seemed to be focusing most of their resources on identifying and assessing innovations to increase productivity for the target commodities, i.e. on IDO 1.

In the sites visited, IDO 2 appeared to be receiving the second most attention. Support for farmer cooperatives and hub models are expected to encourage traders to buy from small farmers and farmers to sell more to traders, and therefore increase the relative share of small producers in total supply of the target commodities to towns and urban centers. Several of the teams are working on the food safety dimensions of product quality through collaboration with A4HN. There did not appear to be any work addressing other aspects of product quality.

The other IDO receiving quite a bit of attention was IDO 6. The multi-stakeholder platforms are expected to increase recognition and support for the development of the value chains for the targeted species.

IDOs

There was reasonably strong consensus among the staff and the stakeholders that research has been designed to ensure inclusiveness of resource-poor smallholder farmers. The staff also agreed that there has been an appropriate balance in the attention given to the program's intermediate development objectives.

³⁸ It had been planned to also assess progress in generating impacts but for reasons already explained at different points above, it is too early to assess impacts and therefore too early to assess evidence generated on impacts. In any event, assessment of impact assessment methods and evidence generated on impacts is a program level issue.

The other three IDOs, employment, nutrition and environmental impacts had not received much attention as of yet. This is not true at all sites. For example, the team in Nicaragua is working more actively on innovations to reduce environmental impacts. The team in Egypt is working more actively on employment because of its SDC mandate.

It is important to note that, even for the IDOs receiving the most attention, there were imbalances in the attention being given to the wide range of innovations needed to make progress. The value chain teams for the most part were working on small parts of large, complex puzzles.

Prospects for Making Progress

The teams had started to assess innovations for increasing producer productivity. There is every reason to believe that the value chains work will lead to identification of innovations that have the potential to increase livestock and fish productivity. The real challenge will be to develop and implement realistic strategies to ensure uptake beyond the locations where the value team chains are working. As discussed above, the teams had not been giving enough attention to this challenge.

In all of the sites visited, the teams were addressing local organizational options for better linking farmers to markets. These options should help to increase quantities of the target commodities going into local markets from small producers. The teams were not, however, working on post-production value chain efficiency with traders, transporters, processors, retailers and others engaged in getting products to consumers in towns and urban centers – so it is not clear why the relative market share of supply coming from small producers is likely to increase more than a negligible amount.

Some of the institutional models being worked on such as hubs, women retailer groups, and community slaughter slabs should, if viable, create new employment opportunities. However, the value chains work in most countries is likely to make a relatively limited contribution to employment and income generation because the teams are not looking at opportunities for increasing productivity, efficiency and employment in input supply, processing, trading and transport enterprises.

The prospects for improving nutritional status through increased consumption of the targeted commodities seemed to be quite limited. This could well happen in the local communities where the teams are working if increased sales by the farmers participating in the program help to drive down market prices. However, the prospects for impacting on nutritional status of poor consumers living in towns and urban areas will be limited until there is a rebalancing to address productivity and efficiency of the entire value chain.

Most of the value chain teams, other than in Nicaragua, had not been working on activities specifically focused on reducing environmental impacts. It does not seem likely that environmental impacts will be reduced unless there is concerted attention to this issue at the other sites as well.

The prospects look to be a bit better for getting policy makers and development actors to recognize and support the development of small-scale production systems for the target commodities. The national platforms in Tanzania, Uganda and Egypt should all contribute to this, as will the platform being set up by the Ministry of Livestock in Ethiopia. However, the contributions of these platforms will depend heavily on how well they function and how much is invested in generating evidence to ensure there is well-informed dialogue on sector strategies and policies. Thus far, the value chain teams had not been working on these issues.

While prospects for making significant progress on the programs IDO's currently look to be limited, the value chain teams have an opportunity to create a greater range of benefits for more value chain actors and for poor consumers through innovative thinking on options for transforming the target value chains working at

all scales, not just at the local level. Value chain transformation away from inefficient local markets to aligned transactions can create opportunities for embedded producer services, value chain financing, product development and differentiation, improved quality and safety management, and efficient procurement, operations and logistics. The cumulative changes in the organization, structure and performance of value chains can become “game changers” for making progress on the all intermediate development outcomes.

Key Points, Recommendations and Working Suggestions

Key Points

- The value chain teams were focusing most resources on assessing innovations to increase productivity, i.e. on IDO 1.
- The prospects look to be reasonable for getting policy makers and development actors to recognize and support the development of small-scale production systems for the target commodities.
- The prospects for making significant contributions to employment, income generation and improving nutritional status of poor consumers will likely be increased if there is a rebalancing to address productivity and efficiency along entire value chains.
- Transformative changes in the organization, structure and performance of value chains are needed to make more than very incremental progress on the intermediate development outcomes.

Recommendations

2. The teams need to give greater attention to identifying and assessing strategies for transforming the target value chains, working at all scales and at all nodes of the value chains. [VCC]

Working Suggestions

- § Ensure that greater attention is given to the environmental impacts of current value chains and the innovations being worked on to support value chains upgrading [VCC]

9. Conclusions

Considering all the questions and indicators addressed in the evaluation, the performance of the value chains R4D in Livestock and Fish meets reasonable expectations. This assessment is based on scoring of the 50 indicators in the evaluation matrix.³⁹ Following completion of the evaluation, the indicators were scored on a five point scale, ranging from: below expectations (1), somewhat below expectations (2), meeting expectation (3), somewhat above expectations (4), to above expectations (5). The average score of the indicators was then calculated for each of the CGIAR evaluation criteria. The results are summarized in the following table.

Table 13: Average Scores of Indicators related to CGIAR Criteria

| CGIAR Criteria | Number Indicators | Average Score |
|--------------------|-------------------|---------------|
| Relevance | 16 | 3.0 |
| Effectiveness | 36 | 2.9 |
| Efficiency | 15 | 3.1 |
| Impact | 10 | 2.4 |
| Sustainability | 4 | 2.3 |
| Quality of Science | 19 | 3.2 |

An assessment that the value chains R4D is performing in line with expectations – not substantially better or worse – is not damning with faint praise. The program has taken on a difficult challenge in trying to use value chain R4D to drive and inform the development of pro-poor animal-food source value chains. Value chains work, whether research on value chains or complete value chains development programs, can be resource intensive. Many new professional competencies are needed, effective partnerships need to be established, and a wide range of stakeholders and beneficiaries need to be involved from the start. The program has done relatively well in meeting several of these challenges but has not done as well as might have been hoped or expected on others. The program now needs to consolidate its strengths while taking steps to address some of the limitations identified in the section on findings and recommendations. Particular attention needs to be given to strategies and approaches for increasing impact and sustainability.⁴⁰

The main strengths of the value chains R4D approach of Livestock and Fish included: a relatively sound conceptual framework and theory of change, effective and efficient value chain coordination and oversight, mostly appropriate research agendas, sufficient multi-disciplinarity, and appropriate and effective partnerships. This assessment is based on the average scores of the indicators for each evaluation question, summarized in the following table.

Table 14: Average Scores of Indicators for Evaluation Questions

| Evaluation Question | Number Indicators | Average Score |
|---|-------------------|---------------|
| 1) How appropriate are the conceptual framework and theory of change? | 12 | 3.8 |
| 2) How appropriate were country and sector selection? | 4 | 2.5 |
| 3) How effective and efficient has been VCD coordination and oversight? | 8 | 3.6 |
| 4) Have financial and human resources been sufficient? | 4 | 2.0 |
| 5) How appropriate have been the VC research agendas? | 17 | 3.6 |

³⁹ See Annex N for the scores on each indicator. While there certainly is room for adjusting individual scores up or down, the general patterns reported in the two tables in this section should be robust in the like of the relatively large number of indicators for the CGIAR criteria and the more central evaluation questions.

⁴⁰ It must be noted, however, that relatively few indicators related to these CGIAR criteria since it was considered premature at this point to assess impacts and sustainability.

| | | |
|---|----|-----|
| 6) How strong are synergies between VCD and other thematic research? | 4 | 2.0 |
| 7) To what extent has there been sufficient and effective multi-disciplinarity? | 6 | 3.3 |
| 8) How appropriate and effective has been partnership and stakeholder engagement? | 10 | 3.4 |
| 9) What progress has been made in technological and institutional innovation? | 7 | 2.9 |
| 10) What progress has been made in value chain upgrading? | 12 | 2.4 |
| 11) What are prospects for scaling? | 9 | 1.8 |
| 12) What are prospects for achieving progress on the IDOs? | 7 | 1.7 |

As seen in the table, two key areas of concern are the insufficiency and uncertainty of human and financial resources, and relatively weak synergies between the value chains R4D and other thematic research. These are program level issues that should be addressed in greater depth in the up-coming IEE.

Another major area of concern is the modest progress on assessment of technological and institutional innovations, minimal support for value chain upgrading even when taking into account that the program is focused on value chains R4D and not value chains development per se, and the uncertain prospects for scaling and achieving progress on the IDOs. As indicated in the section on findings and recommendations, there are steps the program can and should take to accelerate progress and adjustments that can be made to increased prospects for scaling.

While the program needs to take steps to improve performance, there does appear to be a strong value proposition for value chains R4D on pro-poor animal-food source value chains. The value chain teams are, for the most part, focused on enhancing small producer capacity to be reliable suppliers in areas where there are high poverty rates and underdeveloped market linkages and producer support services. These are important challenges that have not been receiving enough attention since the start of the value chains era. The CGIAR partner centers have strong capacities for preparing producers to be more productive and for generating valid knowledge on potential technological and institutional options for improving the productivity and efficiency of the value chains. Together, the staff brings expertise, experience and complementary disciplines for effective value chains R4D.

Even though it is still early in the life of the program, the value chains R4D teams had already demonstrated the roles that R4D can play in supporting value chains development in conjunction with other partners. The target sectors and value chains had been characterized and assessed, and the information generated was used to build consensus with partners and stakeholders on agendas for follow up research and support for value chain upgrading. Moreover, the investments in assessment, partnerships building, stakeholder engagement and capacity development had clearly helped to establish a foundation for implementation of development interventions by program partners. The program scientists had been working diligently and effectively with national partners and had moved into multidisciplinary mode if not yet interdisciplinary mode.

The value proposition for the value chains R4D of Livestock and Fish could be even stronger. Looking forward, the value proposition for the value chains R4D is likely to be greater for partners, poor producers and consumers of animal source foods, other value chain actors, and potential donors and investors if the value chains R4D of the program evolves in the following directions:

- More emphasis is given to piloting and validating of innovations compared to value chain characterization and assessment, methods refinement, and adaptation of well-known technological and institutional innovations
- Greater attention is given to assessing dynamic trends, expected future challenges and whether the innovations are likely to be relevant and viable in the coming decade or so, and not only under current circumstances

- Greater priority is given to strategies and innovations for transforming local farming and marketing systems, with correspondingly less priority being given to incremental change strategies
- The program has found ways to work on value chain issues that are beyond current core competencies such as market linkages, business models for services delivery, product development and quality, enabling policies and regulations, and value chain coordination mechanisms
- The value chain teams effectively mobilize expertise from other knowledge partners and leveraging support from the discovery flagships
- There is systematic use of comparative framework and quasi-experimental designs, leading to improved evidence on interventions and how contexts affect the likelihood of success

The above might be viewed a top priorities among the priorities for enhancing the performance and value proposition of the value chains R4D of Livestock and Fish.

Annexes

- A: Evaluation Terms of Reference
- B: Evaluation Matrix
- C: Information Sources and Target Respondents
- D: Information Collection Approaches and Instruments
- E: Ethiopia Field Visit
- F: Uganda Field Visit
- G: Tanzania Field Visit
- H: Egypt Field Visit
- I: List of People Met
- J: Program Documents Reviewed
- K: Summary Survey Results
- L: Explanation of Changes
- M: R4D Site Outcomes and Interventions Driving Impact Pathways
- N: Performance Scores for Evaluation Indicators
- O: Organization and Timing of Evaluation Activities
- P: Lessons Learned
- Q: Main Limitations of the Evaluation
- R: References

Annex A: Evaluation Terms of Reference

Background

The CGIAR is a global partnership that unites organizations engaged in research for a food secure future. CGIAR research is dedicated to reducing rural poverty, increasing food security, improving human health and nutrition, and ensuring more sustainable management of natural resources. It is carried out by the 15 centers who are members of the CGIAR Consortium in close collaboration with hundreds of partner organizations, including national and regional research institutes, civil society organizations, academia, and the private sector.

Within the CGIAR Consortium, the International Livestock Research Institute (<http://www.ilri.org/>) leads the Livestock and Fish (L&F) CGIAR Research Program, which aims to increase the productivity of small-scale livestock and fish systems in sustainable ways, making meat, milk and fish more available and affordable to poor consumers across the developing world.

The CGIAR in its Strategy and Results Framework (SRF) has developed a research agenda that uses as a starting point its system's vision:

To reduce poverty and hunger, improve human health and nutrition, and enhance ecosystem resilience through high-quality international agricultural research, partnership and leadership.

In pursuit of this vision, the CGIAR has identified four strategic system-level outcomes (SLOs):

1. Reduced rural poverty
2. Improved food security
3. Improved nutrition and health
4. Sustainably managed natural resources.

The L&F program aims to contribute to these SLOs by transforming research outputs into development impacts that will positively change lives of millions of beneficiaries. These changes are measured through Intermediate Development Outcomes (IDOs), defined as “changes that occur in the medium term that are intended to affect positively the welfare of the targeted population or environment, and which result, in part, from research carried out by the CGIAR and its partners.”⁴¹

The Livestock and Fish IDOs are the following:

IDO1 Increased livestock and fish productivity in small-scale production systems for the target animal-source food commodities (contributing primarily to SLO2);

IDO2 Increased quantity and improved quality of the target commodity supplied from the target animal-source food small-scale production and marketing systems (SLO2);

IDO3 Increased employment and income for low-income actors in the target animal-source food value chains, with an increased share of employment for and income controlled by low-income women (SLO1 and SLO3);

IDO4 Increased consumption of the target animal-source food commodity responsible for filling a larger share of the nutrient gap for the poor, particularly for nutritionally vulnerable populations (women of reproductive age and young children) (SLO3);

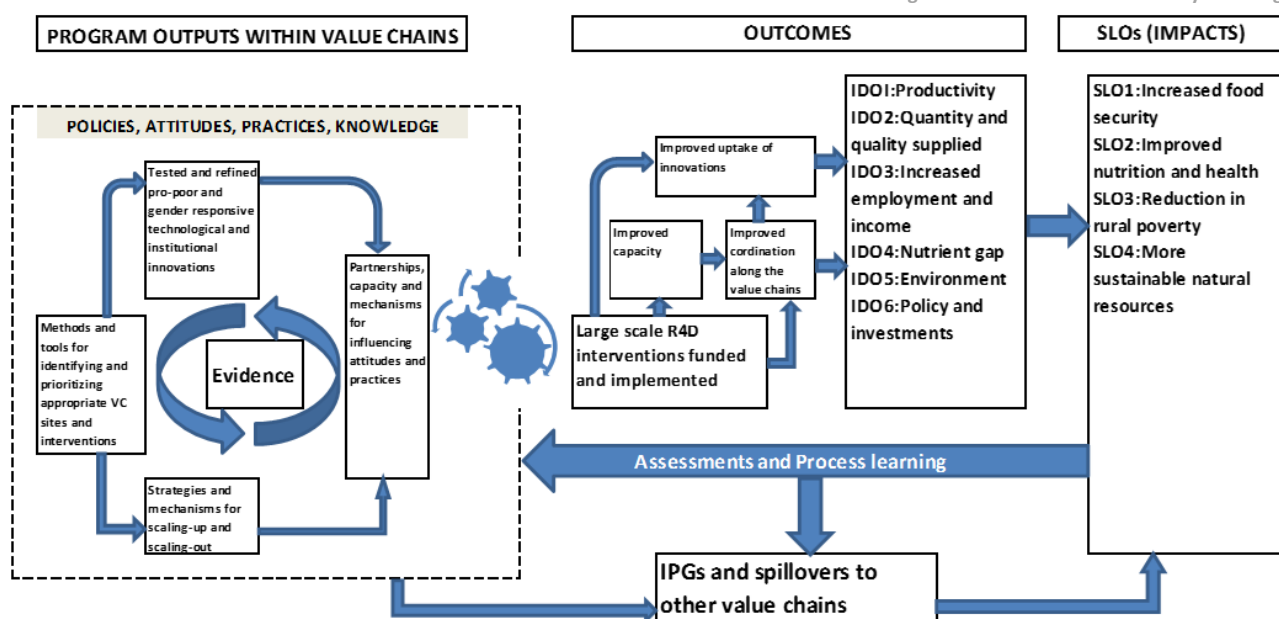
IDO5 Lower environment impacts in the target livestock and fish value chains (SLO4);

IDO6 Policies (including investments) and development actors recognize and support the development of small-scale livestock and fish production and marketing systems, and seek to increase the participation of women within these value chains (SLO2 and SLO4);

⁴¹ Independent Science and Partnership Council (2012). Strengthening Strategy and Results Through Prioritization.

A simple Theory of Change diagram is shown below, indicating how program outputs attempt to contribute to SLO impacts (Figure 1). Here, L&F scientists are responsible for creating research outputs in the form of pro-poor technological and institutional innovations appropriate to selected livestock and fish value chains (our “innovation labs”). However, it is only through the establishment of effective partnerships commingled with generous donor funding and private sector engagement that research outputs can be exploited within research-for-development (R4D) platforms. Through the combined efforts of our research and development partners, successful R4D interventions will then be up- and out-scaled in order to produce research outcomes that contribute to our IDOs. The combined effect of both research outcomes and the creation of international public goods (IPGs), mediated through a plethora of (necessary) support factors such as policies, customs, practices, intervention partners, funding, and so on, ultimately contribute to the sort of systems-level vision that animates the CGIAR research agenda and is made concrete through its four SLOs.

Figure 1: Livestock and Fish Theory of Change



For more information about the L&F program, visit our website at <http://livestockfish.cgiar.org/>.

Evaluation Focus

The L&F program proposed an approach to accelerate the translation of research- into-development impacts by focusing its research efforts on pro-poor transformation of selected animal-source food value chains. Setting an explicit objective of using research to design and improve specific value chains to increase the availability of and access to particularly nutritious foods by the poor is intended to have two effects. First, it is intended to improve the relevance and urgency of the research agenda by having the needs of the value chain define the research agenda, while fostering multidisciplinary assessment and technology development within a systems-based framework. This recognizes the importance of putting research challenges into context and the benefits of integrating technical and institutional innovation. Second, the intention is for engagement in selected value chains to provide a direct and immediate impact pathway for taking innovations to scale as development interventions. This engagement will involve addressing the range of issues necessary to ensure uptake of the intervention, and creating the appropriate evidence base to convince development partners of the benefits the intervention will generate.

Purpose

Now entering its third year, the program would like to commission an independent, external evaluation of the value chain approach and whether it is being implemented effectively, efficiently and in a manner that contributes to the overall quality of its science outputs.

Evaluation Clients

The primary audiences for of the evaluation include:

1. The program management (CRP Director/PPMC), who will use the evaluation to inform strategic decision making;
2. The ILRI Institutional Management Committee (IMC) and Board of Trustees (BoT), who will use the evaluation as an input to their CRP oversight responsibility;
3. The Independent Evaluation Arrangement (IEA) of the CGIAR, who will use it to inform the CRP-wide Independent External Evaluation (IEE) of this CRP, which is scheduled to take place in 2015.

The final evaluation report will be posted to the L&F and IEA websites as publicly accessible documents and so will become an international public good, potentially of interest to a much broader audience.

Evaluation Team Composition and Qualifications

The Evaluation Team will be composed of 3 evaluators (see below for roles and responsibilities). The basic qualifications for the evaluation team and Evaluation Leader are as follows:

Evaluation Team

1. Expert knowledge of value chains;
2. Expert knowledge of agricultural technology transfer in a development context;
3. Expert knowledge of Research for Development programs.

Lead Evaluator

1. The Lead Evaluator will have substantive knowledge of the field of evaluation, with at least 10 years of experience as a practicing evaluator;
2. Experience acting as an evaluation team leader.

Scope of Evaluation

indicates the value chains targeted by the evaluation; value chain selection criteria were limited to geographic proximity (they are all located in Africa) and their level of progress relative to other, less active value chains. While only 4 VCs are the target of the evaluation, a broader understanding of other VCs is required for the sake of comparison and completeness (as part of a desk review). **Error! Reference source not found.** provides a breakdown of the overall L&F Program expenditure by thematic area; within the context of the overall program, VC development has consistently received substantive funding. A more detailed overview of ongoing research within the relevant VCs can be downloaded from the L&F (http://livestock-fish.wikispaces.com/2013_AnnualReports).

Table A-1: Target Value Chains

| Country | Value Chain | Key Contact |
|----------|-----------------|-----------------------------|
| Egypt | Aquaculture | Malcolm Dickson, WorldFish |
| Ethiopia | Small Ruminants | Barbara Rischkowsky, ICARDA |
| Tanzania | Dairy | Amos Omore, ILRI |
| Uganda | Pork | Danilo Pezo, ILRI |

Table A-2: Non-Target Value Chains

| Country | Value Chain | Key Contact |
|--------------|-----------------|---|
| Bangladesh | Shrimp | Jens Peter Tan Dalsgaard, World Fish Program Manager |
| Burkina Faso | Small Ruminants | Abdou Fall, ILRI, Ouagadougou, Burkina Faso |
| India | Dairy | Purvi Mehta, International Livestock Research Institute, Delhi |
| Nicaragua | Dairy | Rein Van der Hoek, Forage based crop-livestock systems specialist, CIAT-Nicaragua |
| Vietnam | Pork | Fred Unger, International Livestock Research Institute, Hanoi |

Evaluation Questions

The L&F program has identified 8 evaluation questions that are of critical interest and 8 additional questions that of interest to the CRP, but not regarded as critical. Working with the Evaluation Manager (EM), the Lead Evaluator will finalize the list of evaluation questions and identify appropriate indicators and data sources. Each evaluation question corresponds to one or more of the IEA's evaluation criteria, which should be used to guide the development of the evaluation methodology (more information on the evaluation criteria can be found in the *CGIAR Standards for Independent External Evaluation, Annexes*, October, 2013). The finalized list of evaluation questions will be included in the Inception Report and will be presented in an Evaluation Question Matrix.

| Questions of Critical Interest | Relevance | Effectiveness | Efficiency | Impact | Sustainability | Science Quality |
|---|-----------|---------------|------------|--------|----------------|-----------------|
| 1. Is the conceptual framework appropriate for assessing progress in developing appropriate interventions for value chains and the research needed to continue improving their productivity? | | | | | | |
| 2. Are transactions costs associated with developing the research agenda within a multidisciplinary, systems-based framework sufficiently outweighed by the benefits? | | | | | | |
| 3. Are the theories of change and impact pathways sufficiently articulated for how impact will be achieved in the value chains? | | | | | | |
| 4. Has the engagement process with partners and stakeholders within the selected value chains been appropriately articulated and implemented, including a communication strategy? | | | | | | |
| 5. Are the methods for assessing research priorities and evaluating best-bet innovations adequately described, sufficient and implemented appropriately? | | | | | | |
| 6. Has the research agenda been appropriately defined for the social sciences of value chain development, including such areas as value chain analysis, environmental sustainability, gender analysis, policy analysis and technology evaluation? | | | | | | |
| 7. Does the value chain agenda effectively inform and draw from the program's technology platforms? | | | | | | |
| 8. Is an appropriate balance being achieved in terms of consistent, harmonized application of the approach across value chains versus adapting application to the specific value chain context? | | | | | | |

| Questions of Interest | Relevance | Effectiveness | Efficiency | Impact | Sustainability | Science Quality |
|--|-----------|---------------|------------|--------|----------------|-----------------|
| 9. Is the argument convincing that a value chain approach will improve the relevance and urgency of the research agenda? | | | | | | |
| 10. Is the strategy for selecting value chains with wider regional potential and in pairs by species across regions consistent with the need to generate global public goods? | | | | | | |
| 11. Has an appropriate research agenda been articulated for validating the methodology for selecting target value chains? | | | | | | |
| 12. Have the appropriate research and development partnerships been formed to support the engagement and research agenda within the value chains, and have their roles been appropriately defined? | | | | | | |
| 13. Is the research strategy appropriately designed to ensure inclusiveness of resource-poor smallholder farmers, especially women and youth? | | | | | | |
| 14. Is the research strategy appropriately designed to achieve the objective of designing interventions that can go to scale within the timeframe of the program? | | | | | | |
| 15. Is the disciplinary composition of the country teams evolving appropriately to support the integrated approach? | | | | | | |
| 16. Is the level and focus of investment appropriate across the value chains? | | | | | | |
| 17. Is there an appropriate level of and strategies for capacity development embedded within the value chain work | | | | | | |

Evaluation Approach and Methodology

Methodology

The evaluation methodology is within the discretion of the evaluation team, but must be explained in detail in the inception report and approved by the CRP before fieldwork begins. Possible methodological components might include, but are not limited to the following:

1. Orientation and background meeting with the CRP Director.
2. Review of CRP key documents: (a) CRP Proposal; (b) VC Situational Analysis; and (c) the Impact Pathways, and so on;
3. Review of recent CRP publications;
4. Formulation of key questions (based on the areas of focus) for inviting written submissions from stakeholders;
5. Review of analysis of findings from written submissions;
6. Key informant interviews from within the CRP, SPAC and partner organizations;
7. Field site visits
8. Comparative analysis of the VC effectiveness with other organizational models, possibly drawing on those adopted by other commodity CGIAR CRPs (desk study only);
9. Orientation of the writing team, editing initial and final reports, and taking ownership of the review outputs and recommendations by the Evaluation Team Leader.

Quality Assurance

The evaluation is expected to conform to the *CGIAR Standards for Independent External Evaluations*, including all proscribed ethical protocols. A copy of the Standards can be downloaded from the Independent Evaluation Arrangement website: <http://iea.cgiar.org/>. Quality assurance is a shared responsibility, held by (1) the Evaluation Team (and particularly the Team Leader) who is expected to have a strong grasp of the CGIAR Standards and to ensure they are followed and (2) the Evaluation Manager will also play a key role by checking to ensure that all standards are met during the evaluation process and in relation to all evaluation outputs.

Organization and Timing of the Evaluation:

Timeline

Pending the availability of the evaluators, the timeline for the evaluation is expected to be the following:

| | | |
|---|--------------|----------------------------------|
| Preparatory Phase | | |
| Preparation of ToR | | ECB/EM |
| Review of ToR by ECB, | 2/11 to 2/13 | ECB/ |
| Review of ToR by ERG, SPAC and stakeholders | 4/07 to 4/14 | ERG/SPAC |
| Presentation of ToR to IMC/ILRI BoT | 3/01 to 4/06 | CRP Director |
| Selection of Lead Evaluator | 4/07 to 4/21 | EM/ERG |
| Selection of 2 support Evaluators | 4/30 | EM/Lead Evaluator |
| Inception Phase | | |
| Documents sent to Evaluation Team | 5/01 | EM |
| Documents Reviewed by Evaluation Team | | Evaluation Team |
| Submission of Inception Report | 6/01 | Evaluation Team |
| Review of Inception Report | 6/02 to 6/09 | ECB/ERG/SPAC |
| Response from CRP to Inception Report | 6/16 | EM |
| Roundtable meeting with EM and CRP Management to clarify remaining questions about Inception Report | 6/20 | EM/CRP Director/ Evaluation Team |
| Finalize Inception Report | 6/22 | Evaluation Team/EM |
| Fieldwork Phase | | |
| To be determined by Inception Report | 6/22 to 8/01 | Evaluation Team/EM |
| Follow-Up Phase | | |
| Draft Evaluation Report is submitted | 8/01 | Evaluation Team |
| Finalized Evaluation Report is Submitted | 8/29 | Evaluation Team |
| Draft Action Matrix is submitted | 9/05 | CRP Director/PPMC |
| Action Matrix is finalized. | 9/15 | IMC |

Evaluation Governance/Roles and Responsibilities

Roles and responsibilities are guided by the CGIAR Independent Evaluation Arrangement *Guidance Note for CRP Commissioned External Evaluations*. A copy of the guidance note can be found on the IEA website at <http://iea.cgiar.org/publication/guidance-crp-commissioned-external-evaluations-ccees>.

The Evaluation Manager

The evaluation will be managed by an Evaluation Manager (EM). The EM will coordinate the design, implementation and follow-up of the evaluation. The EM will also establish the Evaluation Reference Group (ERG) consisting of 8-10 members, representing a broad range of interests within the CRP (including management, SPAC, the ILRI BoT and the PPMC). The EM will also establish an Evaluation Commissioning Body (ECB), composed of a small number of CRP senior managers who are arm's length from the focus of the evaluation.

The EM is Keith Child, ILRI, Principal Scientist, Impact and Learning, k.child@cgiar.org

The Evaluation Commissioning Body

Error! Reference source not found. indicates the members of the ECB. Their responsibilities include: plan and manage the design of the evaluation, prepare terms of reference, develop and manage the evaluation reference group, contract the evaluators, brief evaluators and provide them with logistical support, put evaluators in contact with key people, troubleshoot emerging problems and conflicts, give feed-back to the draft evaluation report and provide quality assurance, manage feedback processes including communication events, track responses to evaluation recommendations.

Table A-3: Members of the Evaluation Commissioning Body

| Name | Status | Position | Email |
|------------------|-----------|--|----------------------|
| Tom Randolph | confirmed | Director, CGIAR Research Program on Livestock & Fish | T.Randolph@cgiar.org |
| Suzanne Bertrand | confirmed | DDG Research – Biosciences (ILRI) | S.Bertrand@cgiar.org |
| Shirley Tarawali | confirmed | Director of Institutional Planning (ILRI) | S.Tarawali@cgiar.org |
| Acho Okike | confirmed | Value Chain Development Theme Leader | I.Okike@CGIAR.ORG |
| Pat Rainey | confirmed | L&F Program Support Coordinator | P.Rainey@cgiar.org |

The Evaluation Reference Group

Error! Reference source not found. indicates the members of the ERG. Their responsibilities include: engage at regular intervals, suggest evaluation questions, and comment at key stages of the evaluation. These will include: the evaluation questions, the ToR, the inception report, the draft final report and draft recommendations.

Table A-4: Members of the Evaluation Reference Groups

| Name | Status | Position | Email |
|---------------------|------------------|--|-------------------------|
| An Notenbaert | Confirmed | Targeting Theme Leader and CIAT representative | A.Notenbaert@cgiar.org |
| Antonio Rota | Confirmed | IFAD, Senior Technical Adviser, Livestock and Farming Systems | a.rota@ifad.org |
| Barbara Rischkowsky | Confirmed | ICARDA and VC Coordinator | b.rischkowsky@cgiar.org |
| Charlie Crissman | Confirmed | Discipline Director, Policy, Economics & Social Science (World Fish) | C.Crissman@cgiar.org |
| Cheikh Ly | Confirmed | ILRI BoT | Cheikh.Ly@fao.org |
| Laté Lawson-Lartego | Confirmed | CARE, Director, Economic Development | llawson@care.org |
| Martin Webber | Confirmed | SPAC Representative with VC expertise | mwebber@jeaustin.com |
| Shirley Tarawali | Confirmed, Chair | Director of Institutional Planning (ILRI) | S.Tarawali@cgiar.org |
| Suzanne Bertrand | Confirmed | DDG Research – Biosciences (ILRI) | S.Bertrand@cgiar.org |

CRP Management

The CRP is managed by a CRP Director (Tom Randolph, T.Randolph@cgiar.org) and member of the CRP Program Planning and Management Committee (PPMC). The CRP management is represented on both the

ECB and ERG and will be kept fully informed by its representatives. The CRP management will be involved in the evaluation at all stages, but is required specifically to respond to the Inception Report, the draft Evaluation Report and the finalized Evaluation Report. Additionally, the CRP Management must respond to the recommendations of the evaluation in the form of an Action Matrix and present its response to the ILRI Management Bodies (see below).

Science and Partnership Advisory Committee

The Science and Partnership Advisory Committee (SPAC) provides advisory support and guidance to the L&F program. SPAC is represented on the ERG, but has the additional responsibility of commenting on the TOR and draft Evaluation Report. More information about SPAC can be found on their website at <http://livestockfish.cgiar.org/about/spac/>.

ILRI Institutional Management Committee

ILRI is managed by the ILRI Institutional Management Committee (IMC). The IMC will be kept fully informed at all stages of the evaluation by their representative on the ECB, but has the additional responsibility of endorsing the finalized CRP response to the evaluation (the Action Matrix). More information about the IMC can be found at <http://www.ilri.org/mc>.

ILRI Board of Trustees

The ILRI Board of Trustees (BoT) is represented on the ERG and will be kept fully informed by their representative on the ERG and the Director of the CRP.

Livestock and Fish Partners and other Stakeholders

The L&F CRP is composed of four CGIAR Centres (ICARDA, WorldFish, CIAT and ILRI) and works with a large number of partner institutions (e.g., Care, Irish Aid, Wageningen University, etc.). L&F partners and other stakeholders are represented on the ERG and will be kept fully informed by their representatives. For institutions and other stakeholders not represented on the ERG, key evaluation documents will be posted to the L&F wiki and they will be invited to respond.

Composition of the Evaluation Team

The evaluation team will consist of three members: a Lead Evaluator and 2 support evaluators. The EM will work with the ERG to select a Lead Evaluator. The EM will work with the Lead Evaluator to select 2 additional support Evaluators. The ERG must ratify the selection of all three Evaluators and validate that the selection process has followed a transparent and merit-based approach, and that adequate technical skills are present within the team as a whole to reasonably expect an expert evaluation.

Responsibilities of the Lead Evaluator include, but are not limited to:

1. Identify and support the recruitment of 2 support evaluators;
2. Provide substantive support as required to undertake the evaluation, including managerial oversight of 2 support evaluators;
3. Assist in preparing for the evaluation including drafting correspondence and providing related logistical support as required;
4. Lead preparation of evaluation reports and components thereof as required;
5. Assist in finalizing of the report and ensure that objectives outlined in the ToR have been achieved;
6. Lead presentation of findings during concluding workshop.

Deliverables

Table A-5: Deliverables, Dissemination and Feedback Loops

| Evaluation Phase | Deliverables | Dissemination | Feedback with Stakeholders |
|------------------|--|--|---|
| Inception Phase | Inception Report: to include a clear evaluation methodology and data collection method, propose a detailed work plan with dates, amended ToR | ECB/ERG/EM, Wiki | Reviewed by ECB/ERG. The Inception Report/ToR will be confirmed in a round of questions and answers with the EM and CRP management |
| Fieldwork Phase | Field work to be determined | | |
| Reporting Phase | Draft Evaluation Report with detailed recommendations | ECB/ERG/EM, IMC, ILRI BoT, PPMC, Stakeholders via Wiki | Both the draft and finalized reports will be reviewed by the CRP Director/ECB/ERG/EM. The draft report will be checked for factual errors and clarifications solicited. |
| | Finalized Report | ECB/ERG/EM, IMC, ILRI BoT, PPMC, Stakeholders via Wiki | The finalized Report will be distributed widely. The CRP Director/PPMC will craft a response to the recommendation via an Action Matrix. |
| Follow-up | 1 Day Nairobi (or virtual) Workshop | ECB, ERG, IMC, ILRI BoT and other stakeholders. | 3 hour presentation and question answering session |

Annex B: Evaluation Matrix^{42 43}

| Key Issues, Critical Questions and Indicators | Relevance | Effectiveness | Efficiency | Impact | Sustainability | Science Quality |
|---|-----------|---------------|------------|--------|----------------|-----------------|
| Number of indicators | 13 | 26 | 15 | 9 | 4 | 19 |

Program Design (2 questions)

1) How appropriate are the conceptual framework and theory of change?

| | | | | | | |
|--|--|--|--|--|--|--|
| Conceptual framework is consistent with GCARD Road Map for transforming AR4D systems | | | | | | |
| The conceptual framework is appropriate for identifying and assessing research priorities (1) | | | | | | |
| The conceptual framework is appropriate for assessing progress in developing appropriate value chain interventions (1) | | | | | | |
| The theory of change and impact pathways are clearly articulated (3) | | | | | | |
| Evidence has been generated to support/validate the program's theory of change (IEA standard) | | | | | | |
| Assumptions underlying impact pathways and the theory of change are valid (IEA standard) | | | | | | |

2) How appropriate were country and sector selection?

| | | | | | | |
|---|--|--|--|--|--|--|
| Strategy for selecting value chains is consistent with the need to generate global public goods (10) | | | | | | |
| An appropriate research agenda has been articulated for validating the methodology for selecting target value chains (11) | | | | | | |

Program Management (2 questions)

3) How effective and efficient has been VCD coordination and oversight?

| | | | | | | |
|--|--|--|--|--|--|--|
| Scope and quality of planning and review processes being used (IEA standard) | | | | | | |
| Balance being achieved in terms of consistent, harmonized application of the approach across value chains versus adapting application to the | | | | | | |

⁴² The basis for inclusion of most of the indicators is shown in parentheses in the table. The numbers refer to the questions identified in the evaluation terms of reference. "Rationale" and "output" refer to the program rationale and outputs as summarized in the terms of reference, but not covered by the original set of questions. "IEA standard" refers to issues identified in the IEA guidelines. Only seven indicators were added by the evaluators. These addressed the following key issues: coordination between VCD and thematic areas, coordination among with other CRPs, partner transactions costs, adequacy of site characterization, attention to policies and services, balance of attention given to the program's six IDOs, and impact assessment data collection.

⁴³ The changes made in the final evaluation matrix compared to the evaluation matrix in the Inception Report are indicated as follows: (a) yellow highlighting – new question or indicator, (b) strikethrough – indicator or part of indicator eliminated

| | | | | | | |
|---|--|--|--|--|--|--|
| specific value chain context (8) | | | | | | |
| Technical support provided to R4D sites | | | | | | |
| Adequacy of information exchange and cross-site learning | | | | | | |
| Level of collaboration and coordination among partner institutions with other CRPs (evaluators) | | | | | | |
| Transaction costs incurred by the participating institutions and partners (evaluators) | | | | | | |

4) Have financial and human resources been sufficient?

| | | | | | | |
|---|--|--|--|--|--|--|
| Human resources available in the quantity and time planned (IEA standard) | | | | | | |
| Financial resources available in the quantity and time planned (IEA standard) | | | | | | |

R4D Implementation (4 questions)

5) How appropriate have been the VC research agendas?

| | | | | | | |
|--|--|--|--|--|--|--|
| The selected value chains have been adequately characterized and appraised with supporting information and data (evaluators) | | | | | | |
| Methods for assessing research priorities and evaluating best-bet innovations are being implemented appropriately (5) | | | | | | |
| Appropriate attention been given to views and needs of the value chain actors in defining the research agendas (Rationale) | | | | | | |
| An appropriate animal science research agenda | | | | | | |
| Relevance of research agenda for pro-poor value chain upgrading (9) | | | | | | |
| An appropriate research agenda has been defined for the social sciences of value chain development (6) | | | | | | |
| Sufficient attention to post-production value chain technologies | | | | | | |
| Appropriate methods for assessing prospective innovations | | | | | | |
| Research agendas reflect attention to areas of comparative advantage relative to other research suppliers (IEA standard) | | | | | | |

6) How strong are synergies between VCD and other thematic research?

| | | | | | | |
|--|--|--|--|--|--|--|
| Changes in the scope of issues being addressed in thematic research (Rationale) | | | | | | |
| The value chain agenda effectively informs and draws from the program's technology platforms (7) | | | | | | |
| Level of collaboration and coordination between managers of VCD and thematic components | | | | | | |

7) To what extent has there been sufficient and effective multi-disciplinarity?

| | | | | | | |
|---|--|--|--|--|--|--|
| Use of system-based frameworks in assessments and technology development (Rationale 1) | | | | | | |
| Benefits from developing the research agenda within a multidisciplinary, systems-based framework (2) | | | | | | |
| Transactions costs for developing the research agenda within a multidisciplinary, systems-based framework (2) | | | | | | |
| Disciplinary composition of the country teams has been evolving appropriately to support the integrated approach (15) | | | | | | |

8) How appropriate and effective has been partnership and stakeholder engagement?

| | | | | | | |
|---|--|--|--|--|--|--|
| Appropriate partnerships with development organizations | | | | | | |
| Performance of different program partners (IEA standard) | | | | | | |
| Clearly articulated engagement process with partners and stakeholders within the selected value chains (4) | | | | | | |
| Appropriate and sufficient range of partnerships | | | | | | |
| Roles have been clearly defined for research and development partnerships (11) | | | | | | |
| Communication strategy has been developed and is being implemented for partnership and stakeholder engagement (4) | | | | | | |

Outputs to Outcomes (4 questions)

9) What progress has been made in technological and institutional innovation?

| | | | | | | |
|--|--|--|--|--|--|--|
| Pro-poor and gender responsive technological and institutional innovations identified (Output) | | | | | | |
| Program has identified policies and strategies for improving access to essential services (evaluators) | | | | | | |
| Progress compared to plans and expected research impact pathways (IEA standard) | | | | | | |

10) What progress has been made in value chain upgrading?

| | | | | | | |
|---|--|--|--|--|--|--|
| Funding mobilized for large scale R4D interventions (Outcome) | | | | | | |
| Level and focus of investment across the value chains (16) | | | | | | |
| Level of and strategies for capacity development (17) | | | | | | |
| Improved capacity of value chain actors and service providers (Outcome) | | | | | | |
| Improved coordination along the value chains (Outcome) | | | | | | |
| Rate and spread of uptake of innovations (Outcome) | | | | | | |

11) What are prospects for scaling?

| | | | | | | |
|--|--|--|--|--|--|--|
| Interventions identified can go to scale within the timeframe of the program (14) | | | | | | |
| Appropriate evidence on the benefits the interventions (Rationale) | | | | | | |
| Range of issues necessary to ensure uptake of the interventions identified (Rationale) | | | | | | |
| Realistic strategies and mechanisms for scaling-up and scaling-out have been identified (Output) | | | | | | |

12) What are prospects for achieving progress on the IDOs?

| | | | | | | |
|---|--|--|--|--|--|--|
| Research designed to ensure inclusiveness of resource-poor smallholder farmers, especially women and youth (13) | | | | | | |
| Appropriate balance in the attention given to the IDOs (evaluators) | | | | | | |
| Data being collected to allow assessment of impacts (evaluators) | | | | | | |

Annex C: Information Sources and Target Respondents

| Critical Questions and Indicators | Information Sources | Target Respondents |
|-----------------------------------|---------------------|--------------------|
|-----------------------------------|---------------------|--------------------|

Program Design

1) How appropriate are the conceptual framework and theory of change?

| | | |
|--|---|---|
| Conceptual framework is appropriate for identifying and assessing research priorities | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members |
| Conceptual framework is appropriate for assessing progress in developing appropriate value chain interventions | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members |
| The theory of change and impact pathways are clearly articulated | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Program reports • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members |
| Evidence has been generated to support/validate the program's theory of change | <ul style="list-style-type: none"> • Informant interviews • Program reports | <ul style="list-style-type: none"> • Program staff • Partners |
| Assumptions underlying impact pathways and the theory of change are valid | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Program reports • Program wiki • Secondary data | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members |

2) How appropriate were country and sector selection?

| | | |
|--|---|---|
| Strategy for selecting value chains is consistent with the need to generate global public goods | <ul style="list-style-type: none"> • Questionnaires • Informant interviews | <ul style="list-style-type: none"> • Program staff • Partners |
| An appropriate research agenda has been articulated for validating the methodology for selecting target value chains | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners |

Program Management

3) How effective and efficient has been VCD coordination and oversight?

| | | |
|---|--|---|
| Scope and quality of planning and review processes being used | <ul style="list-style-type: none"> • Informant interviews • Work plans • Program wiki • Management records | <ul style="list-style-type: none"> • Program staff • Partners |
| Balance being achieved in terms of consistent, harmonized application of the approach across value chains versus adapting application to the specific value | <ul style="list-style-type: none"> • Informant interviews • Work plans • Program reports • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners |

| | | |
|--|--|---|
| chain context | <ul style="list-style-type: none"> • Management records | |
| Technical support provided to R4D sites | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners |
| Adequacy of information exchange and cross site-learning | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Program reports | <ul style="list-style-type: none"> • Program staff • Partners |
| Level of collaboration and with other CRPs | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Work plans • Program wiki • Management records | <ul style="list-style-type: none"> • Program staff • Partners |

4) Have financial and human resources been sufficient?

| | | |
|--|--|---|
| Human resources available in the quantity and time planned | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Management records | <ul style="list-style-type: none"> • Program staff • Partners |
| Financial resources available in the quantity and time planned | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Management records | <ul style="list-style-type: none"> • Program staff • Partners |

R4D Implementation

5) How appropriate have been the VC research agendas?

| | | |
|---|---|--|
| The selected value chains have been adequately characterized and appraised with supporting information and data | <ul style="list-style-type: none"> • Work plans • Informant interviews • Program reports • Progress indicators | <ul style="list-style-type: none"> • Program staff • Partners • VCD agencies & NGOs • R&D peers |
| Methods for assessing research priorities and evaluating best-bet innovations are being implemented appropriately | <ul style="list-style-type: none"> • Informant interviews • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners • VCD agencies & NGOs • R&D peers |
| Appropriate attention been given to views and needs of the value chain actors in defining the research agendas | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Program reports | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |
| An appropriate animal science research agenda | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Program reports | <ul style="list-style-type: none"> • Program staff • Partners • VCD agencies & NGOs • R&D peers |
| Relevance of the research agenda for pro-poor value chain upgrading | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |
| An appropriate research agenda has been defined for the social sciences of value | <ul style="list-style-type: none"> • Questionnaires • Informant interviews | <ul style="list-style-type: none"> • Program staff • Partners |

| | | |
|---|--|---|
| chain development | <ul style="list-style-type: none"> • Group meetings • Work plans • Progress indicators • Program reports • Program wiki | <ul style="list-style-type: none"> • R&D research peers |
| Sufficient attention to post-production value chain technologies | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Work plans • Progress indicators • | <ul style="list-style-type: none"> • Program staff • Partners • VCD agencies & NGOs • VC experts • SPAC members |
| Appropriate methods for assessing prospective innovations | <ul style="list-style-type: none"> • Questionnaires • Program reports • Informant interviews | <ul style="list-style-type: none"> • Program staff • VC experts • SPAC members |
| Research agendas reflect attention to areas of comparative advantage relative to other research suppliers | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Work plans • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members • VCD agencies & NGOs • R&D peers |

6) How strong are synergies between VCD and other thematic research?

| | | |
|--|--|---|
| Changes in the scope of issues being addressed in thematic research | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners |
| The value chain agenda effectively informs and draws from the program's technology platforms | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners |
| Level of collaboration and coordination between managers of VCD and thematic components | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Work plans • Program wiki • Management records | <ul style="list-style-type: none"> • Program staff • Partners |

7) To what extent has there been sufficient and effective multi-disciplinarity?

| | | |
|--|---|---|
| Use of system-based frameworks in assessments and technology development | <ul style="list-style-type: none"> • Informant interviews • Group meetings • Work plans • Program reports • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners |
| Benefits from developing the research agenda within a multidisciplinary, systems-based framework | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Case stories | <ul style="list-style-type: none"> • Program staff • Partners |

| | | |
|--|--|---|
| Transactions costs for developing the research agenda within a multidisciplinary, systems-based framework | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Management records • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners |
| Disciplinary composition of the country teams has been evolving appropriately to support the integrated approach | <ul style="list-style-type: none"> • Informant interviews • Management records | <ul style="list-style-type: none"> • Program staff • Partners |

8) How appropriate and effective has been partnership and stakeholder engagement?

| | | |
|---|---|--|
| Appropriate partnerships with development organizations | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings | <ul style="list-style-type: none"> • Program staff • Partners |
| Performance of different program partners | <ul style="list-style-type: none"> • Informant interviews • Group meetings • Management records | <ul style="list-style-type: none"> • Program staff • Partners |
| Clearly articulated engagement process with partners and stakeholders within the selected value chain | <ul style="list-style-type: none"> • Informant interviews • Group meetings • Work plans • Program reports • Management records | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |
| Appropriate and sufficient range of partnerships | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings | <ul style="list-style-type: none"> • Program staff • Partners |
| Roles have been clearly defined for research and development partnerships | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings | <ul style="list-style-type: none"> • Program staff • Partners |
| Communication strategy has been developed and is being implemented for partnership and stakeholder engagement | <ul style="list-style-type: none"> • Work plans • Program reports • Management records • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |

Outputs to Outcomes

9) What progress has been made in technological and institutional innovation?

| | | |
|---|--|--|
| Pro-poor and gender responsive technological and institutional innovations identified | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Program reports • Program wiki • Case stories • Group meetings • Progress indicators | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members • Value chain actors • External stakeholders |
| Program has identified policies and strategies for improving access to essential services | <ul style="list-style-type: none"> • Questionnaire • Informant interviews • Program reports • Case stories • Group meetings • Progress indicators | <ul style="list-style-type: none"> • Program staff • Partners • External stakeholders |
| Progress compared to plans and expected | <ul style="list-style-type: none"> • Informant interviews | <ul style="list-style-type: none"> • Program staff |

| | | |
|--------------------------|---|--|
| research impact pathways | <ul style="list-style-type: none"> • Group meetings • Work plans • Program reports • Management records | <ul style="list-style-type: none"> • Partners |
|--------------------------|---|--|

10) What progress has been made in value chain upgrading?

| | | |
|---|--|--|
| Funding mobilized for large scale R4D interventions | <ul style="list-style-type: none"> • Informant interviews • Group meetings • Program reports • Management records • Case stories | <ul style="list-style-type: none"> • Program staff • Partners |
| Level and focus of investment across the value chains | <ul style="list-style-type: none"> • Questionnaires • Work plans • Program reports • Case stories | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |
| Level of and strategies for capacity development | <ul style="list-style-type: none"> • Questionnaires • Work plans • Program reports • Case stories • Progress indicators | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |
| Improved coordination along the value chains | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Program reports • Case stories • Group meetings • Progress indicators | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |

11) What are prospects for scaling?

| | | |
|--|--|--|
| Interventions identified can go to scale within the timeframe of the program | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Program reports • Case stories • Group meetings • Progress indicators | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |
| Appropriate evidence on the benefits the interventions | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Program reports • Case stories | <ul style="list-style-type: none"> • Program staff • Partners • External stakeholders |
| Range of issues necessary to ensure uptake of the interventions identified and addressed | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Group meetings • Work plans • Program reports • Case stories | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members • Value chain actors • External stakeholders |
| Realistic strategies and mechanisms for scaling-up and scaling-out have been identified | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Program reports • Program wiki | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members |

| | | |
|--|--|---|
| | <ul style="list-style-type: none"> • Case stories • Group meetings | <ul style="list-style-type: none"> • External stakeholders |
|--|--|---|

12) What are prospects for achieving progress on the IDOs?

| | | |
|--|---|--|
| Research designed to ensure inclusiveness of resource-poor smallholder farmers, especially women and youth | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Program reports • Case stories • Group meetings | <ul style="list-style-type: none"> • Program staff • Partners • VC experts • SPAC members • Value chain actors • External stakeholders |
| Appropriate balance in the attention given to the IDOs | <ul style="list-style-type: none"> • Questionnaires • Informant interviews • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners • Value chain actors • External stakeholders |
| Data being collected to allow assessment of impacts | <ul style="list-style-type: none"> • Work plans • Program reports | <ul style="list-style-type: none"> • Program staff • Partners |

Information Sources Notes:

- Management records = contracts, MoUs, minutes, financial and budget data
- Questionnaires – targeted to thematic researchers, program partners, VC researchers, peers, value chain actors (if possible) (at all sites)
- Informant interviews – targeted to value chain coordinators, program scientists, program partners, peers, local officials
- Program reports = published and internal reports
- Case stories – includes institutional and innovation histories, significant change, success case replication
- Group meetings (semi-structured discussions) – targeted to program scientists and partners together; program scientists; value chain actors including producer representatives
- Program wiki – includes blog, stories and information on website (beyond program reports and management records)

Annex D: Information Collection Approaches and Instruments

Group meetings

Purpose: The most important set of activities during the R4D site visits was the group meetings. The group meetings enabled efficient communication and exploration of issues with program staff, partners, value chain actors and external stakeholders.

Approach: There were three distinct types of group meetings. One was a start-up meeting with program staff and selected partners. The second was one or more group meetings with the producers and other value chain actors directly participating in the value chain activities of the program. The third was a wrap-up workshop with program staff, partners and external stakeholders. In the Inception Report, a standard set of topics was identified for each of these meetings.

Identification of participants: The VCC for each site had responsibility for setting up all the group meetings. For the group meetings with producers and other value chain actors, a representative range of 15-20 participants were to have been invited to each meeting. For the wrap up meeting involving external stakeholders, the VCC had responsibility for identifying prospective participants covering, to the extent possible, all sub-categories of external stakeholders. The list of potential participants were shared with and endorsed by the evaluation leader.

Informant Interviews

Purpose: During the startup visit in Nairobi and the four site visits, interviews were carried out with key informants in order to achieve a more in-depth and nuanced understanding of the key evaluation questions and indicators. The informant interviews were particularly important for exploring issues with program beneficiaries and external stakeholders.

Identification of informants: the VCCs were provided with a list of the categories of informants the evaluation team wanted to meet during the field visit. The VCCs were asked to identify specific people and ascertain their availability and willingness to meet with the evaluation team. The list of informants was provided to the evaluation leader for review and endorsement. The VCC was then responsible for scheduling meetings and arranging logistics for the team to meet with the informants.

Approach: A list of topics based on the evaluation matrix was developed for each category of informants and included in the Inception Report. The specific questions and sequence of questions varied depending on the respondent sub-category (e.g. public official versus value chain actor versus producer organization official) and findings from previous interviews. Summary notes were kept on main observations and major issues arising. The following table identifies the topical list of issues for the informant interviews.

| Topical List of Issues | Staff | Partners | VC Actors | External Stakeholders |
|------------------------|-------|----------|-----------|-----------------------|
|------------------------|-------|----------|-----------|-----------------------|

Program Design

| | | | | |
|--|---|---|--|---|
| Appropriateness and usefulness of conceptual framework | X | X | | |
| Clarity of theory of change and impact pathways | X | X | | |
| Validity of assumptions and sufficiency of evidence for theory of change and impact pathways | X | X | | X |
| Strategy and methodology for selecting value chains | X | X | | X |

Program Management

| | | | | |
|--|---|---|--|--|
| Timeliness and availability of resources | X | X | | |
| Dependence on restricted project funds to implement the program activities | X | X | | |

R4D Implementation

| | | | | |
|--|---|---|---|---|
| Methods for assessing priorities and evaluating innovations | X | X | | X |
| Retrofitting historical bilateral projects | X | X | | |
| Relevance of the research for value chain upgrading | X | X | X | X |
| What social science research; how appropriate? | X | X | | X |
| Appropriate and sufficient characterization of VCs | X | X | | X |
| Enough attention to views of VC actors | X | X | X | X |
| Research agenda reflects CG comparative advantage | X | X | | X |
| Coordination between VCD and thematic components | X | X | | |
| Transactions costs for working in multidisciplinary, systems-based framework | X | X | | |
| Changes due to linking thematic research and VCD | X | X | | X |
| Clarity and quality of stakeholder engagement process | X | X | X | X |
| Opportunities and prospects for engaging private sector | X | X | X | X |

Outputs to Outcomes

| | | | | |
|---|---|---|---|---|
| Interventions pro-poor and gender responsive | X | X | X | X |
| Policies and strategies for improving competitiveness | X | X | X | X |
| Policies and strategies for improving services | X | X | | X |
| Level and types of investments made in VCD | X | X | | X |
| Capacity development activities and approaches | X | X | X | X |
| Capacity of VC actors improved | X | X | X | X |
| VC coordination improved | X | X | X | X |
| Innovations being taken up | X | X | X | X |
| Interventions likely to go to scale | X | X | X | X |
| Issues being addressed ensure uptake of interventions | X | X | X | X |
| Strategies for scaling up realistic | X | X | | X |
| Balance in attention to IDOs | X | X | X | X |

Program Staff Questionnaire

Purpose: Livestock and Fish has nine R4D sites for value chains development but only four were visited during the evaluation. A staff survey was carried out to give program staff at all sites the opportunity to express their views on the key indicators in the evaluation matrix.

Sampling: all program staff and partners directly involved in program implementation were asked to participate in the survey. The list of program staff was provided by the program management unit. The list provided by the management unit included email addresses for 80 staff; all were included in the survey request; other names were added when omissions were identified, so the list was as complete as was possible.

Approach: The staff survey comprised 46 closed-ended statements scored by respondents on the degree of agreement or disagreement with a statement, and eight open-ended questions. The staff respondents were also asked to indicate their location, main theme affiliation, gender, and institution. The survey was

administered through the internet using SurveyMonkey. An email request was sent all staff to fill the questionnaire with a deadline of 15 September, approximately one month after the survey opened. Two reminders were sent as the deadline for the survey came and went. The deadline for the survey was extended for two weeks until the end of September. The staff survey questions follow below.

Part One: Closed-end Questions⁴⁴

Program Design and Management⁴⁵

1. The program level theory of change and impact pathways are clearly articulated
2. Assumptions underlying the program level theory of change and impact pathways are valid
3. The value chain impact pathways are sufficient for assessing research priorities
4. The value chain impact pathways are sufficient for assessing progress in developing appropriate value chain interventions
5. Improving productivity and efficiency in smaller-scale production systems will make the most effective contribution to increasing supplies of animal source foods available to the poor
6. Strategy for selecting value chains is consistent with the need to generate global public goods
7. An appropriate research agenda has been articulated for validating the methodology for selecting target value chains
8. There has been effective and efficient collaboration and coordination among the partner institutions
9. There has been effective and efficient collaboration and coordination with other CRPs
10. There has been effective cross-site comparison and learning
11. Transaction costs incurred by the participating institutions and partners have been acceptable and worthwhile
12. Financial and human resources have been available in the quantity and time planned

R4D Implementation

13. An appropriate research agenda has been defined for the social sciences of value chain development
14. The value chain approach has helped identify and prioritize demand for new technologies
15. Appropriate attention been given to views and needs of the value chain actors in defining the research agendas
16. Use of a value chain approach has increased relevance of the research agenda for pro-poor value chain upgrading
17. The program has conducted research on entire value chains
18. Research agendas reflect attention to areas of CGIAR comparative advantage relative to other research suppliers
19. There has been effective and efficient collaboration and coordination between managers of VCD and other thematic components
20. Use of a value chain approach has led to changes in the scope of issues being addressed in animal genetics, health and feeds research
21. The value chain agenda effectively informs and draws from the program's technology themes
22. Transactions costs for developing the research agendas within the program's multidisciplinary approach have been acceptable
23. There have been clear benefits from the program's multidisciplinary approach
24. There is a sense of shared ownership of and responsibility for program success and outputs among the program partners
25. Roles have been clearly defined for research and development partners
26. The capacities and skills of each partner organization are being fully utilized and leveraged

⁴⁴ All questions were scored: strongly agree, mostly agree, neutral/not sure, disagree, strongly disagree.

⁴⁵ The survey followed the evaluation matrix in the Inception Report, in which program design and program management were combined.

27. The Program has been effective in tapping into the research and business expertise of the private sector

Outputs to Outcomes

28. Program has identified pro-poor and gender responsive technological innovations
29. Program has identified pro-poor and gender responsive institutional innovations
30. Program has identified policies and strategies for improving access to essential services
31. Private-sector provision of services for the target value chains has improved as a result of the program
32. Realistic strategies for mobilizing resources for value chain upgrading has been developed
33. Level of investment needed for value chain upgrading has been sufficient
34. Level of resources committed to capacity development has been sufficient
35. Strategies for capacity development have been appropriate
36. Capacity of value chain actors and service providers has improved due to Program interventions
37. Small and medium scale agro-processing enterprises have increased value addition and efficiency as a result of the program
38. There is improved coordination along the value chains due to Program interventions
39. Interventions identified can go to scale within the next 4-5 years
40. Full range of issues necessary to ensure uptake of the interventions has been identified
41. National policies are conducive to increasing private sector investments in smallholder livestock and fish value chains
42. Realistic strategies and mechanisms for scaling-up and scaling-out have been identified
43. The program has effectively harnessed the growth of the private sector and the increased dynamism of markets in its support for value chain upgrading
44. Appropriate evidence has been generated on the benefits the interventions
45. Research has been designed to ensure inclusiveness of resource-poor smallholder farmers, especially women and youth
46. There has been an appropriate balance in the attention given to the program's intermediate development objectives

Part Two: Open-ended Questions

1. What are main differences in the LF CRP country level work compared to previous CGIAR support to national research and development programs?
2. What is new or different about the animal science innovations now receiving priority attention?
3. What are the LF CRP areas of comparative advantage relative to other research and knowledge suppliers?
4. Do you feel that the disciplinary competencies are okay? What changes would you make if changes were possible?
5. How can CG scientists supporting adaptive research and VC development keep market value as scientists?
6. What needs to be done to support scaling to new areas and new countries?
7. What might be ways to strengthen cross-site and cross-value chain learning?
8. In cases where VCD progress has met or exceeded expectations, what have been important success factors?

Part Three: Respondent Categories

1. Percentage time allocation to Livestock and Fish
2. Location
3. Institution
4. Primary theme affiliation
5. Gender
6. Years working in CGIAR

Partners and Stakeholder Questionnaire

Purpose: The purpose of this survey was to get feedback from partners and stakeholders on the program's value chain approach and partner engagement processes. The main issues of concern were: (a) satisfaction with the engagement processes, and (b) perspective on the scope and usefulness of the program's value chains approach.

Sampling: The value chain coordinators at the sites visited were asked to identify and provide email contacts for 15-20 knowledgeable, external stakeholders per site. The VCCs were asked to find respondents from all of the external stakeholder categories to the extent possible (i.e. convenience, quota sampling). A total of 113 potential respondents were identified, as follows: Tanzania – 35, Uganda – 36, Egypt – 23, and Ethiopia – 19.

Approach: The questionnaire for collaborators and stakeholders included 31 close-ended questions and four open-ended questions. All respondents were asked to indicate their respondent category (as well as the R4D site, gender and nationality). The survey was administered through the internet using SurveyMonkey. An email request was sent to fill the questionnaire with a deadline of 15 September and two reminders were sent as the deadline for the survey came and went. The deadline for the survey was extended for two weeks until the end of September. The questions for this survey follow below.

Part One: Closed-end Questions⁴⁶

1. There has been effective and efficient collaboration and coordination among the partner institutions
2. Transaction costs incurred by the participating institutions and partners have been acceptable and worthwhile
3. Financial and human resources have been available in the quantity and time planned
4. The value chain approach has helped identify and prioritize demand for new technologies
5. Appropriate attention been given to views and needs of the value chain actors in defining the research agendas
6. Use of a value chain approach has increased relevance of the research agenda for pro-poor value chain upgrading
7. The program has conducted research on entire value chains
8. Research agendas reflect attention to areas of CGIAR comparative advantage relative to other research suppliers
9. Use of a value chain approach has led to changes in the scope of issues being addressed in animal genetics, health and feeds research
10. The value chain agenda effectively builds on the program's technology themes
11. There have been clear benefits from the program's multidisciplinary research approach
12. There is a sense of shared ownership of and responsibility for program success and outputs among the program partners
13. Roles have been clearly defined for research and development partners
14. The capacities and skills of each partner organization are being fully utilized and leveraged
15. The program has been effective in tapping into the research and business expertise of the private sector
16. Program has identified pro-poor and gender responsive technological innovations
17. Program has identified pro-poor and gender responsive institutional innovations
18. Program has identified policies and strategies for improving access to essential services
19. Private-sector provision of services for the target value chains has improved as a result of the program
20. Level of resources committed to capacity development has been sufficient
21. Strategies for capacity development have been appropriate

⁴⁶ All questions were scored: strongly agree, mostly agree, neutral/not sure, disagree, strongly disagree.

22. Capacity of value chain actors and service providers has improved due to Program interventions
23. Small and medium scale agro-processing enterprises have increased value addition and efficiency due to Program interventions
24. There is improved coordination along the value chains due to Program interventions
25. Interventions identified can go to scale within the next 4-5 years
26. Full range of issues necessary to ensure uptake of the interventions has been identified
27. National policies are conducive to increasing private sector investments in smallholder livestock and fish value chains
28. Realistic strategies and mechanisms for scaling-up and scaling-out have been identified
29. The program has effectively harnessed the growth of the private sector and the increased dynamism of markets in its support for value chain upgrading
30. Appropriate evidence has been generated on the benefits the interventions
31. Research has been designed to ensure inclusiveness of resource-poor smallholder farmers, especially women and youth

Part Two: Open-ended Questions

1. What are main differences in the LF CRP country level work compared to previous CGIAR support to national research and development programs?
2. What is new or different about the animal science innovations now receiving priority attention?
3. What are the LF CRP areas of comparative advantage relative to other research and knowledge suppliers?
4. In cases where VCD progress has met or exceeded expectations, what have been important success factors?

Part Three: Respondent Categories

1. Country
2. Main employer/affiliation:
 - Producer or private sector organization
 - Research organization or university
 - Other public sector unit, agency or organization
 - Developmental organization, agency or project
 - Value chain actor (including for profit service providers)
3. Level of involvement
 - Regularly involved in planning and implementation
 - Periodically involved
 - Attended key event(s), not otherwise involved
 - Not involved in planning and implementation
4. Gender

Value Chain Experts and SPAC Questionnaire

Purpose: Several evaluation questions required familiarity with the value chain approaches being used by other organization. The purpose of this questionnaire was to seek views of independent experts beyond the three evaluators. The questions are shown in Annex G3.

Selection of respondents: There were three complementary categories of respondents: (a) value chain experts at agencies and organizations that have been leaders in developing and implementing the value chain approach, (b) CGIAR scientists participating in the PIM (CRP 2.2) VC analysis and development group who are not directly involved in the LF CRP, and (c) members of the SPAC. The external value chain experts

were identified through a combination of personal knowledge and websites of these organizations, with particular attention to ensuring regional and gender diversity. The list of members of the PIM VC analysis and development group was provided by a member of the group. A total 42 potential respondents were identified, including 15 CGIAR value chain specialists, 20 external experts, and seven members of the SPAC.

Approach: This questionnaire comprised ten open-ended questions. The external VC experts and members of the PIM VC group were provided with an internet linkage to the program wiki and encouraged to browse the program wiki for additional information they might find to be relevant in answering the questions. They were specifically asked to review CRP 3.7 proposal and annual reports for 2012 and 2012. As for the other surveys, the expert survey was through the internet using SurveyMonkey. An email request was sent to fill the questionnaire with a deadline of 15 September and two reminders were sent as the deadline for the survey came and went. The deadline for the survey was extended for two weeks until the end of September. The questions for this survey follow below.

1. In what ways does the program's value chain approach build on or fail to build on lessons learned from previous value chains research and development?
2. What are your views on the combination of countries and animal sub-sectors selected for the value chains research and development work of the program?
3. What are the program's areas of comparative advantage for value chains work relative to other research and development organizations?
4. What is new or different about the animal feed, health and genetics innovations now receiving priority attention?
5. What disciplinary competencies are most important for supporting livestock and fish value chain research and development?
6. Does it appear from the program documents that the clear and appropriate roles have been defined for the program's research and development partners?
7. Are other value chain experts and organizations likely to use the VC "toolkit" of methods being developed by the program?
8. What needs to be done in value chains research and development programs to support scaling to new areas and new countries?
9. What might be ways to support cross-site and cross-value chain learning?
10. In VCD programs that have met or exceeded expectations, what have been important success factors?

Case Stories

Purpose: The main purpose of the case studies was to generate information for appraising progress on identification of innovations and support for value chain upgrading. It was also expected that the case studies would provide a basis for assessing similarities and differences in the approaches being taken at the different sites, particularly the relative emphasis on institutional versus technological innovations.

Approach: There were three types of case studies: technological innovation, institutional change, and value chain business models:

- 1) Technological institution - 2-3 important technological innovations thus far developed and/or promoted, including technologies already being worked on before 2012 as long as there had additional appraisal and promotion activities under the program. The brief narratives were to have included information on key contributions and processes, factors positively and negatively impacting on innovation appraisal and promotion, and actions taken to improve likelihood of success. Include lessons learned.

- 2) Institutional changes - 2-3 changes in institutional arrangements that had contributed to improved access to services, better value chain coordination, increased marketing efficiency or other types of value chain upgrading (other than through technological change). The short narratives were to have included information on key drivers, success factors, and other lessons learned.
- 3) Value chain business models - business models for 2-3 distinct value chains covering the following issues: producers, buyers, products (including brands, if any), service providers, governance, performance and expectations and priorities of the value chain actors for upgrading.

To prepare the case stories, the VCCs were asked to convene a meeting of program staff and selected partners to discuss and agree on the case stories, and then identify people to prepare the narratives.

The intention had been to systematically review the cases to identify critical success factors and lessons learned, and the extent to which a business perspective is being used by the value chain teams. This was not possible after it was found that too few sites were far enough along to be able to identify validated innovations. VCCs were asked to identify the technological and institutional interventions receiving attention. There was no basis for comparative analysis. Instead, lists were assembled of the technological and institutional interventions. These are included in the Findings section along with interpretation of the patterns found.

SWOT Analyses

Most of the sites were not far enough along to have done SWOT analyses of the value chains approach being used. Of the sites that were far enough along, only one site – Uganda – did the SWOT analysis as requested. In Uganda, a review discussion was held on the SWOT analysis. In two other sites, Tanzania and Egypt, a participatory SWOT analysis was incorporated into the wrap up workshops. The approach used was to have each participant identify only one strength, weakness, opportunity or threat during the first round – not one of each, and not more than one. The results were posted, clustered and discussed. In the second round, participants added one more point, either to reinforce a point made the first round or to bring up another issue. This was used as a basis for discussion and further clustering. This was followed by a third round, after which there was plenary discussion to draw conclusions on action to build on strengths and address weaknesses and threats. The SWOT analysis results from these three sites were incorporated into the findings with clear indications that these are results from the SWOT analyses.

Program Progress Indicators

Purpose: The purpose for request update on a selected subset of the program progress indicators was to assemble information for an objective comparison of progress across the sites.

Approach: The subset of program indicators were those directly related to the value chain research agenda, progress on innovations and contributions to value chain upgrading. The intention was to ask the value chain coordinators to provide information on total numbers for the program, starting in January 2012. The instructions were to include best guess estimates in cases where data are not available but note that these were best guess estimates. The request for these indicators was made by the program management unit in order to avoid possible confusion of a separate request for management reporting by the evaluation team.

The indicators for which summary information was requested are shown in the text box below.

4. Number of (methodological) tools produced by CRP
5. % of tools that have an explicit target of women farmers
10. Number of strategic value chains analyzed by CRP
13. Number of trainees in short-term programs facilitated by CRP (male)
14. Number of trainees in short-term programs facilitated by CRP (female)
15. Number of trainees in long-term programs facilitated by CRP (male)
16. Number of trainees in long-term programs facilitated by CRP (female)
18. Number of technologies/NRM practices under research in the CRP
19. % of technologies under research that have an explicit target of women farmers
23. Number of technologies /NRM practices field tested
27. Number of technologies/NRM practices released by public and private sector partners globally
33. Number of hectares under improved technologies or management practices as a result of CRP research
34. Number of farmers and others who have applied new technologies or management practices as a result of CRP research
28. Numbers of policies/ regulations/ administrative procedures analyzed
29. Number of policies / regulations / administrative procedures drafted and presented for public/stakeholder consultation
30. Number of policies / regulations / administrative procedures presented for legislation
31. Number of policies / regulations / administrative procedures prepared passed/approved
32. Number of policies / regulations / administrative procedures passed for which implementation has begun

The request sent to ask for updating of the progress indicators was not sufficiently precise and so the value chain coordinators only provided an update for additional progress in 2014. Moreover, the request only included a small sub-set of the indicators that had been initially included. Therefore no analysis was possible on the little information collected. However, the updated indicators were very useful as a checklist for following up with the value chain coordinator to request copies of reports or additional information for activities undertaken in 2014. This helped very much in filling gaps for reports that were not yet finalized and therefore had not been posted to the wiki.

Annex E: Ethiopia Field Visit

Overview of Activities

Field trips

The first 2 ½ days were used for field trips, including a two day trip to the highlands. In the highlands, two areas were visited: Menz and Sinamba. In Menz, a meeting was held with 47 producers including nine women. In Sinamba, there was a meeting with 30 producers including seven women. In both locations, the main issues discussed were: the scope of program activities, changes observed during the last three years, satisfaction with the interventions, marketing and interests in joint marketing, access to support services, presence of any developmental NGOs, and whether the women felt that they had been benefiting from the support provided. In both locations, separate short meetings were held with the members of the farmer cooperatives in order to discuss cooperative activities and plans.

During the highlands visit, there was also a joint meeting with researchers from the Debre Berhan research station. The main issues discussed were the priorities and activities of the national researcher and how these related to program activities and priorities.

The other half-day field visit was to Luna Abattoir. The issues discussed included: procurement and transport practices particularly in relation to small-scale producers, required animal traits, export market requirements, constraints on operational efficiency, steps being taken to manage risks and future business development plans.

Interviews in Addis Ababa

Individual meetings were held with several of the program staff. These interviews covered program coordination and planning, impression of the “poor to poor” strategy, challenges in aligning the interests of research and development partners, impacts of bilateral funding, staff competencies and time management, synergies with the technical flagships, time taken for value chain assessments, new insights from gender analysis, capacity development priorities and approaches, challenges in developing agricultural markets in Ethiopia, possibilities for developing private sector services, multi-disciplinarity particularly in relation to integrated animal science research, and prospects for scaling.

Meetings and issues discussed with collaborators and stakeholders were:

- Ministry of Agriculture Director of Livestock – government sense of ownership, government initiatives and priorities, government interest in supporting the private sector, scope of the program research agenda
- Director of Veterinary Services – challenges faced developing veterinary services, main goals for strengthening animal health services, vaccine quality control
- LIVES project – staffing, scope of interventions, value chain approach, number of sectors covered, working relations with national partners, level of funding, collaboration with Livestock and Fish
- Person working on Livestock Master Plan – sector strategy and policy priorities, particularly as related to focus on poor and marginal areas and on building export capacity; specific priorities for small ruminants sub-sector
- Food and Agriculture Organization Sub-Regional Office – range of value chain and business development activities in Ethiopia and sub-region; familiarity with program
- USAID Livestock Development Marketing Project – main objectives and locations, opportunities to improve marketing systems and processing enterprises, prospects for value chain transformation and private sector development,

- IGAD – overview of IGAD, main priorities of government for livestock value development

Wrap Up Workshop

The wrap up workshop started with self-introductions by the participants. The purpose and scope of the evaluation were presented followed by an overview of the objectives and agenda of the workshop.

The evaluation team then shared preliminary observations based on the field visits, interviews and documents reviewed. Participants gave their observations on the evaluators' observations following a round-the-table format.⁴⁷ A second round-the-table set of comments were made on the participant's own observations about the program's value chains approach.

The second activity was a small group exercise for "modified contribution analysis. The participants were divided into two groups, one focused on local market value chains and the second focused on value chains to towns or urban centers. The groups were asked to identify up to five main interventions needed to improve the value chains what research and innovation support was needed. The purpose of the exercise was to stimulated reflection and discussion on differences in value chain development strategies depending on what specific types of value chains were being worked on, and discussion on the balances between research and innovation support.

The third and last activity was a world café for recommendations development. Participants were divided into two groups. Because it was late, there were too few participants, and there was too little time to run the exercise properly, the participants did not mix between rounds of the world café. The three rounds of café covered: (1) main limitations of the value chains approach of the program, (2) what should change to enhance effectiveness of program, and (3) recommendations to the CRP program managers and the VCC.

Selected Findings

The following are selected findings from staff meeting, meetings with stakeholders, and the field trip:

- Researchers had been working on community based breeding in the villages visited for many years before the program started.
- Technical scientists comfortable with adaptive research, backstopping, partnering
- Breeds appear to be attracting price premiums, leading to higher incomes
- Most prevalent diseases are not difficult or complex; can be addressed with better delivery
- Women said that the benefits from improved sheep are applicable to them even though men sell.
- Government has been involved from beginning and is engaged as full partner
- Livestock state minister is establishing a platform at federal level; had invited all actors to come present what doing
- Government wants to support expansion of private animal health services and PPPs; have a privatization road map
- Business development competency is needed
- Consumers might not be willing to pay premiums for higher quality products
- Probably are more opportunities in inputs supply than in processing
- Emphasis of government in livestock sector master plan is export promotion
- Government is not focused on poor to poor; rather it is focused on capturing market opportunities
- Part time staff with mixed reporting lines of command

⁴⁷ In this format, each participant is given an opportunity to make an observation going around the room. There is minimal discussion since the purpose is to share views rather than debate one or two issues raised by more assertive participants. The round the table format is particularly useful for getting information on the pattern and diversity of viewpoints.

- Capacity development mainly focused on implementation capacity rather than value chain upgrading
- Imbalance in attention to technological versus institutional innovation support

The results of the wrap-up workshop group exercise on priority interventions and required research and innovation support are summarized below.

Group 1

| Interventions | Research and innovation support |
|---|---|
| Farmer group formation | Training Governance/leadership Facilitate access to credit Exchange visit |
| Improved husbandry | Training Introduce technologies – improve feed quality; feed conservation Improved housing |
| Strengthen market participation | Reliable and timely marketing information. Facilitate positive engagement of producers and middlemen Understand the norms & cultures that hinder market participation (women – how impacted - enhance) |
| Improve access to vet inputs & services | Provide scientific support (evidence based) to private vet input and services supply |
| Align supply to specific buyers | Stratification of production (to meet requirements) (breeding stock) Segmentation of market <ul style="list-style-type: none"> • Restaurants, hotels • Boarding schools • Universities • Hospitals • Army |

Group 2

| Interventions | Research and innovation support |
|--|--|
| Producer support services | Group formation (collective action, incentive system, bargaining power) Community Saving (financing) establishments Gender dynamics |
| Improved feed supply from crop and agro-industrial byproducts | Feed technologies for small scale feed processors. Capacity building on feed utilization for producers. Feed markets. Logistics and linkages (feed) producers, byproducts |
| Safety and quality management system for smallholder SR prod systems | Prevention & treatment of diseases and pests Economics of pests and diseases Vaccine production and efficiency Delivery systems of vet/quality services |
| Producers aligned to specific buyers | Economics and trait preferences; meat quality Transaction costs and market premiums |
| Institutional arrangements that increase market participation | Enabling policy (taxation, regulatory, etc. environment) Market info and facilities |

The results of the two groups for the world café on recommendations development are summarized below.

Group 1

Limitations of program:

- Missing core competencies, business development, partner development, insufficient staff time
- Lot of issues not researchable – developmental, policy
- Some delivery depends on partners – beyond control
- Low level of development of private sector is a challenge
- Traditional consumption pattern difficult to change
- Difficult to achieve program goals e.g. gender because of local conditions
- Our limited insight into development partners motivation and capabilities
- Tension between research agenda and development outcomes
- How to connect demand with technology? Demand driven (local) v IPGs.

Changes to enhance effectiveness:

- Reallocate time and competencies
- Resource mobilization to fill gaps
- Intelligent partnering (SNV business)
- Change way we do business with partners; need to empower them; from consultative to appreciative relationship
- Support to private sector e.g. feed formulation; drug shops: main drugs required; upgrade technical areas
- Incubating businesses, not CG, LMD.
- Non researchable issues – partnerships; CAREFUL not passing buck.
- Goals difficult to achieve: adjust goals to country's value chains. Need to be more specific.
- Need to be flexible, dynamic and adjusting planning process. Better design of phase 2.

Recommendations to program managers and VCC:

- Get core competencies
- Intelligent partnering; partner development (Stuart?); Person responsible for partnership (local); redefinition of roles and responsibilities (of partners). Different partners? DFID? PEPE?
- Resource mobilization to fill gaps
- More flexible, dynamic planning phase 2.

Group 2

Limitations of program approach:

- Need for enhanced role of development partners
- Lack of sustainable engagement with private partners
- Staff capacity within CG to do VC approach

Changes to enhance effectiveness:

- Time and resources for coordination of partners
- Identify champions to take the lead
- Ensure benefits to private sector
- Hire the right people
- Needs capacity assessment
- Capacity development of partners

Recommendations to program managers and VCC

- Enhance CRP capacity for fund raising and strategy
- Improve budget process and design of budgets
- Design strategy to engage private sector
- Management review of glass ceiling for non PhDs; 'Short term' use of development experts
- Create Cap Dev plan for partners

Working Suggestions

The evaluators suggest that the value chain team takes steps to address the following issues and opportunities:

- Steps to reinforce capacity of local researchers will be critical for success and sustainability since they will most likely be the first responders when producers run into problems
- Look into farmer seed multiplication for vetch seed in area around 160 km from Menz; this would address forage seed constraint for highland sheep farmers while creating a new case enterprise for other poorer farmers
- Opportunity to bring together producer and trader associations to better coordinate sector development
- Need to be much better informed by and engaged in policy priorities of governments
- Support policy dialogue on quality control systems for vaccinations
- Support the platform being set up by government for coordination; this is an opportunity to tie into an institutional base rather than try to establish own program driven platform

Annex F: Uganda Field Visit

Overview of Activities

Start-up Program Staff Meeting

Most of the first day was devoted to a meeting with program staff and some core partners. During the first part of the workshop, five topics were discussed using a round-the-table format. The issues covered were:

- What are cornerstones of the program's strategy for transforming the pig value chains?
- How does the program strategy build on and go beyond previous R&D support for pigs?
- How does the program strategy build on CGIAR strengths and comparative advantage?
- Has the partner engagement process been effective and efficient?
- What are the roles and responsibilities of main program partners?

Following these discussions, the staff made presentations on three innovation case stories and the SWOT analysis completed with partners in the week preceding the evaluation field visit. The presentations were followed by short discussions focused on the team's intervention priorities and issues affecting implementation of the value chain approach in Uganda.

The last part of the start-up meeting involved only program staff. Several issues related to program management were discussed using a round-the-table format, including:

- Stability, quality and efficiency of planning and reporting processes
- Balance between harmonized application of VC approach and application to specific VC
- How useful and responsive has been the technical backstopping from Nairobi?
- How strong are the synergies among the issues and priorities of the flagships?

Throughout the series of round-the-table discussions, the evaluators asked questions for clarification and made observations, leading to follow up discussion on key issues arising.

Masaka Field Trip

A single full-day field trip was made to program sites near Masaka. The first stop was a meeting at a local administrative office, where a District Veterinary Officer working closely with the program was based. Other people from the administrative office and several farmer cooperative leaders joined for part of the meeting. The main issues discussed were: who provides the front line support on regular basis, what help has the program been besides financial support, characteristics of the local farming systems, cooperative development, awareness and interest of the Chief Administrative Officer in program activities, views on the importance of pigs in that area. The evaluators were also given a briefing on main program interventions in the Masaka area.

The remainder of the day was used to visit specific field sites and program collaborators. The first stop was to meet leaders of the Batejo pig farmer cooperative. The cooperative leaders gave a briefing on main objectives and activities of the cooperative and their views on priorities for program support. The same set of issues later was discussed in a meeting with a second pig farmers' cooperative. A visit was made to a farmer who was providing support to other farmers, involved in pig breeding, and collaborating with the program on feed demonstration. Another stop was to a former teacher who had developed a medium scale operation as a trader and butcher. Issues related to his procurement and slaughtering practices were discussed. The second to last visit was with an informal group of people selling pig meat and running port joints. The main issues discussed were their collaboration and interest in developing a more formal

organization. The last visit was to a feed supplier, where challenges faced in producing and selling high quality but affordable feeds were discussed.

Meetings in Kampala and Entebbe

Meetings and issues discussed with collaborators and stakeholders were:

- Irish Aid - match with strategic priorities, comparative advantage of CGIAR, concerns or appreciation of approach
- Makerere University, Dean for Agriculture and Head of Animal Science - complementarity between university and ILRI capacity; agribusiness capacity in university, possibility for business student research
- Fresh Cut processor - procurement, products produced, customers; quality and safety management
- BRAC – briefing on country activities
- Wambezi cooperative (slaughter house) – range of services provided, capacity utilization, constraints faced, priorities for future development
- CRP A4NH - relationships with Livestock and Fish, methods to assess food safety risks, strategies for addressing food safety fits in value chains work of the program
- GIZ – constraints on access to finance
- ASARECA –ASARECA priorities, comparative advantage, potential for pig industry development in Uganda and region, potential for collaboration to support scaling to new countries
- MAAIF and NaLIRRI – ministry and research system priorities; satisfaction with program approach and engagement
- VEDCO – VEDCO competencies and main activities; extent of collaboration with the program

Wrap-up Workshop

The wrap up workshop started with self-introductions, followed by short opening remarks on the scope and purpose of the evaluation and the objectives and agenda of the wrap up workshop.

The first activity was a presentation of the SWOT analysis, followed by round-the-table observations to reinforce issues or make new observations on the strengths, weaknesses, opportunities and threats facing implementation of the value chain approach in the pig sector.

The second activity was small group discussions on partnering. Participants were divided into three groups. Each group addressed three issues using a round-the-table approach:

- Are roles and responsibilities of research and development partners clear? If not fully, what could be done better?
- Does program approach fit with ILRI strengths and comparative advantage? If not fully, what could be done better?
- Are the right private sector VC actors sufficiently involved? If not fully, what could be done better?

The groups shared their results leading into a plenary discussion.

The third activity was a second round of small group discussions, this one focused on research issues. There were four groups, each one focused on a specific “generic” value chain: rural to rural, peri-urban to urban, and rural to processor in Kampala, peri-urban to urban. Each group was asked to identify the five most important upgrading interventions and then to identify what research is needed in relation to each intervention priority. Results were shared and discussed in plenary.

The last activity was a world café for recommendations development. The standard set of questions was posed for the three rounds of discussion, i.e.: (1) main limitations of the value chains approach of the

program, (2) what should change to enhance effectiveness of program, and (3) recommendations to CRP program managers and the VCC. Three changes were introduced to improve effectiveness of the approach relative to Ethiopia: people rotated to different groups after each round, table hosts were asked to show clusters and linkages on the charts, as was done by one table host in Ethiopia, and the evaluators circulated to make sure instructions were understood rather than sit with any of the groups. The results were shared and discussed in plenary in order to identify common issues arising, particularly in relation to limitations and recommendations.

The workshop ended with a brief overview on next steps in the evaluation, including target dates.

Selected Findings

The following are selected findings from staff meeting, meetings with stakeholders, and the field trip:

- Strong engagement process and internal team approach; not clear that has been clear delineation of roles and responsibilities
- Small and medium private VC actors actively involved in diagnostic work but are themselves weak and unable to be drivers
- Strong support provided by DVOs to strengthen services to farmers – e.g. breeding farmers, hub and slaughter house
- Minimal animal science research; need to accelerate field research, particularly on breed characterization and epidemiology
- Sector policy and regulations are a dilemma; start up initiatives could well benefit from informal sector since costs of meeting full standards would be high but informal market channels also limits future growth since means must mainly be a snack food
- Repeated mention of need for MoUs to stabilize partnerships
- Weak alignment with IrishAid country priorities
- Fat is problem for processors; need no more than 10-15%; had decided to buy skinned and defatted but problem with contamination
- Strong alignment of interests and close collaboration between LF and A4NH
- Potential for complementarity with regional research since in most countries, pigs are not a priority
- Small-scale butchers, traders and input suppliers are facing challenges and need support
- Stakeholders involved in assessments were not clear on their roles in follow up

The results of the group exercise during the wrap-up workshop on value chain upgrading interventions and related research priorities are summarized below.

Group 1: Rural to Rural

| | |
|---|--|
| VC upgrading interventions (5 most important) | What research is needed? |
| Improve animal management practices – maturity at early age | Indigenous micro-organisms (from Korea); how to improve breeds |
| Preventive measures for key diseases | Epidemiological studies on main diseases; vaccine development; setting up demonstrations |
| Farmer institutional groups – inputs, markets | Why other groups have worked or not worked |
| Set up slaughter slabs in rural areas | How many slaughter places existing; where and how many traders |
| Meat inspections | How many staff for inspections; where gaps are |

Group 2: Peri-urban to Urban

| | |
|---|--|
| VC upgrading interventions (5 most important) | What research is needed? |
| Dealing with diseases; particularly ASF | Research on how to prevent ASF; either by vaccine, resistant breeds |
| Improving feed and feeding | Low cost feeding technologies |
| Marketing improvement | Developing business model related to market information, access to feed, access to loans |
| Improving carcass quality (fat content) | Feed rations to reduce fat layer; Pig husbandry and management system |
| Handling of animals and pork | Facilities and practices for handling and transport by traders |

Group 3: Rural to processor in Kampala

| | |
|--|-----------------------------------|
| VC upgrading interventions (5 most important) | What research is needed? |
| Improve linkages between chain actors | |
| Quality expectations are not known by actors in chain | |
| Capacity of producers to produce quality animals | Factors impacting on pork quality |
| Address cruel treatment of animals | |
| Disease control | Research on ASF and worms |
| Feeding | Availability and quality of feeds |
| Financing the chain; financial institutions to come on board | |
| Organize producers | |
| Utilization of all parts | |

Group 4: Peri-urban to urban

| | |
|--|--|
| VC upgrading interventions (5 most important) | What research is needed? |
| Feeds | Identify feed options beyond purchased feed |
| Value addition | How promote cottage industries, small machines for processing |
| Feed conversion efficiency, waste and noise management | Validate interventions and how impact on business |
| Food safety | Look into levels of contamination and identify hot spots; Centralized slaughter and inspection |
| Policy and advocacy | Review existing policies to incorporate attention to pigs at various levels; Research on existing groups to identify areas of advocacy |

The results from the world café for recommendations development are summarized in the following tables.

Group 1

| Limitations | What must Change | Recommendations |
|---|--|--|
| Intermittent commitment funding causing loss of momentum; limited funds to partners | Identify and prioritize partners; streamline process Good, clear understanding of roles and responsibilities by | Decentralization of funding from Nairobi to Kampala office (semi-autonomy) |

| | | |
|---|--|--|
| | partners | |
| Different understanding between scientists and partners | Conceptual framework of program should be harmonized and understood by partners | Simplify language and improve communication with partners MoUs with partners Involve partners in budgeting and work planning |
| Involvement and interest of actors | Actors representatives should be engaged at all levels of the program Actors should be clearly defined by their roles & roles spelled out | Scale up initiatives such as PMSP |

Group 2

| | | |
|---|--|---|
| Approach too top down | Grass root drives research agenda Form strong VC actor associations | Needs assessment should be done to prioritize thematic areas of interventions |
| Research driven; more research than development | Integrate action research / on farm research | Demand-driven interventions should be integrated in research |
| Private sector not fully engaged | Engage private sector for sustainability External private sector to fund research | Stimulate commitments to the private sector |
| Implementation - delays | Partner with organizations with proven field experience Share research findings in partners to sharpen implementation | Feedback should be timely |

Group 3

| | | |
|--|--|---|
| Inadequate information flow | | Partner with other institutions building on their comparative advantage |
| Value chain concept relatively new With VC approach, tendency is to spread too thin without seeing outcomes on the ground | Need for a clear understanding of the VC approach | Promote models that empower principal beneficiaries to engage with PP to run with |
| Interactions within teams (thematic flagships) | | |
| Weak linkages among actors | Too much focus at the producer level Need to assess and identify champions, and give them all roles | Streamline financial and contractual procedures with partners and service providers Improve visibility through communication |
| Limited bilateral funding | Source funding from private sector | Tap into private sector financing |
| Perceptions – cultural bias | Sensitization needed on | |

| | | |
|--------------------|---|--|
| | utilization of pork & marketing of the positive attributed | |
| Policy environment | Need to identify critical points to unlock the VC potential | |

Group 4

| | | |
|---|--|---|
| Harmonization of the VC actors | Improve communication and feedback Decentralization of management and decision making | Engage partners to implement developmental activities |
| Risk of spreading wide and very thin on ground | Prioritize researchable issues on available funds | Hire local people in top management process who understand the local context and problems |
| Limit in resources to achieve impact since so many levels | Engaging of active private sector | Involve non research partners in project planning at highest levels (e.g. private sector) |

Working Suggestions

The evaluators suggest that the value chain team takes steps to address the following issues and opportunities:

- Creative strategies to work back from medium scale farmers and butchers
- For work business development training; consider this to be an important next step, it is very important to build on materials readily available on internet
- Strong opportunities for joint activities with agribusiness department of Makerere University
- Regional symposium with ASARECA to support learning with other sites and with other projects
- PPP feasibility appraisal of integrated abattoir/processing plant with contract procurement
- Epidemiology appraisal
- Strategy appraisal for community biosecurity protocols
- Policy on infant industry protection and how fits into EAC commitments

Annex G: Tanzania Field Visit

Overview of Activities

Staff and Partner Meeting - Morogoro

There were two staff and partner meetings. The first was a startup meeting in Morogoro with the staff based there and a core program partner from Sokoine University of Agriculture. The second was a meeting in Dar-es-Salaam involving staff from Morogoro and Tanga, as well as several partners.

The started up meeting in Morogoro was held at SUA, which is hosting the program in Morogoro. The meeting started with a briefing on the program's Maziwa Zaidi (more milk) alliance and the program's impact pathways, piloting activities, main research sites and CRP linkages. The rest of the start-up meeting comprised round-the-table discussions on the program approach and management. The following specific issues were covered:

- How does the program approach differ from other smallholder dairy development projects?
- How does the evolving strategy, as reflected in the impact pathways, go beyond previous support for under IFAD and IrishAid smallholder dairy?
- How does the program strategy build on CGIAR strengths and comparative advantage?
- Balance between harmonized application of VC approach and application to specific VC
- How useful and responsive has been the technical backstopping from Nairobi?
- How strong are the synergies among the issues and priorities of the flagships?

Morogoro Field Trips

There were two half-day field visits. The first was to visit field sites and producers in the program's rural to rural target domain. After a courtesy call to the District Office, visits were made to a wealthy, settled Masai who was building up a large milking operation and had worked with the program on a forage demonstration field. Short visits were made to a small milk collection center operated as a franchise for TangaFresh, and to a woman who had developed an innovative, small scale milk collection and trading enterprise. Back in Morogoro, a meeting was held with several staff of the SUA agricultural economics and agribusiness department in order to discuss their initiatives and priorities, and discuss possibilities for collaboration with the program.

The second half-day visit was to a somewhat more distant village representing the program's semi-intensive production domain. A meeting was held with the leaders of a milk producers group in a village where only a minority of households had cattle. The main issues discussed were previous support (provided by Heifer), problems in maintaining genetic diversity, local demand for milk among the farming population, gender roles in the intensive feeding system, and priorities for future support.

Staff and Partner Meeting – Dar-es-Salaam

The staff and partners meeting in Dar-es-Salaam started with self-introductions. The partners were asked to give short briefings on their main activities and areas of shared interest with the program. Briefings were given by Heifer International (Tanzania), Faidi Market Linkages, the Tanzania Milk Producers Association, the Tanzania Milk Processors Association, and TALRI (Tanzania's livestock research institute).

The briefings were followed by group discussion on the roles of the partners in the Maziwa Zaidi, and satisfaction with the program's research and development agenda and partner engagement process.

The next and final activity was the small group “modified contribution analysis” exercise to identify upgrading interventions and related research needs. Two groups were formed, one focused on extensive systems and the other on intensive systems.

Meetings in Dar es Salaam

Meetings and issues discussed with collaborators and stakeholders were:

- Ministry of Agriculture, Livestock products, markets and infrastructure development – services of department; delivery in field under decentralized system, government priorities for dairy sector development, regulatory enforcement, potential competitiveness of small producers with commercial producers, options for providing breeding support
- Irish Aid – compatibility of country priorities, satisfaction with program approach and delivery, concerns about the profile of the program with senior officials
- IFAD – brief overview of IFAD support activities related to livestock value chains and small enterprise development
- FAO – courtesy call and briefing on FAO activities; discussion on opportunities for engaging with the program
- Tanzania Private Sector Foundation – briefing on recent TPSF support for building up the small-scale private sector including entrepreneurship training; review of business development support capacity in Tanzania

Wrap-up Workshop

The workshop started with self-introductions, followed by short opening remarks on the scope and purpose of the evaluation and the objectives and agenda of the wrap up workshop. The partners who were not at the mid-week meeting then gave a briefing on their activities and collaboration with the program. Briefings were given by the Tanzania Dairy Board, TangaFresh, and BRAC (Tanzania).

This was followed by short discussion on the roles of the partners and satisfaction with the program’s approach and engagement process. This led into introduction of a participatory SWOT analysis.

The SWOT analysis was followed by plenary round-the-table remarks on two areas of concern identified by the evaluators. In the first round, participants were asked to identify “on-the-shelf” technologies that could be taken to the village level for demonstrations, piloting or on-farm adaptive trials. The purpose was to stimulate reflection and discussion on whether the program should not accelerate action on assessment of technological interventions. In the second round, participants were asked to identify scaling strategies. This was used as a basis for discussing the challenges faced in scaling pilot interventions and support for local initiatives.

The last activity, as usual was a world café for recommendations development. There were three groups but one was cancelled after round two because it had focused on limitations and changes in dairy value chains, not the program’s value chains approach. The groups followed the same three rounds of discussion covering limitations, needed changes and recommendations. Participants changed tables after each round while a single table host remained to brief new comers on results from the previous round. At the end of the small group discussions, the results were shared and discussed in plenary.

The workshop ended with a brief overview on next steps in the evaluation, including target dates.

Selected Findings

The following are selected findings from staff meeting, meetings with stakeholders, and the field trip:

- Maziwa Zaidi (more milk) alliance is very good strategy for engaging partners since it avoids the impression that partners are being engaged only to support aims of the program
- Awareness of importance of institutional change, and appreciate role of research on development interventions for proof of concept
- Inclusion of consumption pathways – even if not yet clear and active
- Identified innovators to build on, so not just theory
- Change in TPSF – now more focused on smallholders
- IrishAid – aligned goals and priorities but concerned about research reports as outputs
- Lack of involvement of extension working through district offices
- Agribusiness at SUA, including entrepreneur support program; currently need to reinforce
- Community action is nearly impossible to scale, particularly if farmer group based
- Not aligned with government priorities
- Not taking advantage of new roads going in that will link potential surplus areas with deficit areas
- Not giving enough attention to consumption and food technologies; opportunities exist for value addition through small processors
- Site selection - Most marketed dairy production takes place in Arusha and Kilimanjaro, Tanga and Dar es Salaam Mwanza regions where there is relatively low disease challenge. – so why not working in any of these area?
- SIDO and others for food technology and related enterprise and product development

Results from the group exercise on high priority value chain upgrading interventions and related research from the staff and partners meetings are summarized below.

Extensive systems

| VC upgrading interventions | What research is needed? |
|--|--|
| 1. Year around feed availability | Cost effective ways of overcoming effects of seasonality |
| 2. Access to improved breeds and breeding services | What are appropriate breeds and breeding services |
| 3. Address land ownership problems | |
| 4. Improving bulking and collection marketing | Appropriate collective action |
| 5. Improve knowledge on animal husbandry | Extension research |
| 6. Improve knowledge on agribusiness | Extension research |

Intensive systems

| | |
|--|---|
| 1. Adaptive research – agroecological suitable feeds | Adaptive research - suitability assessments |
| 2. Suitable genetics | Suitability assessments |
| 3. Practice change/ technology adoption – animal husbandry | Social cultural assessments |
| 4. Natural resource base - water | Carrying capacity research |
| 5. Adapting technology for milk cold chain (cooling centers and traders) | Appraisal of what has been working in other areas |
| 6. Generic understanding of consumers | Market research |

The results of the participatory SWOT analysis from the wrap-up workshop are summarized below:

Strengths

- Partnerships: working in partnerships, Maziwa Zaidi coalition, good support from partners for dairy development, multidisciplinary team working toward Maziwa Zaidi, qualified program staff and partners, a number of partners working together with different expertise
- Natural environment – good environment, huge land – but limited by water availability and soil fertility
- Enabling government – government infrastructure to support development, government allows and encourages help from expert organizations – but roads are bad in many places

Weaknesses

- Seasonality – season supply of milk, high fluctuations of milk production, dry season feeding, seasonal feeds and water
- Producer credit - lack of credit for producers, lack of credit for producers
- Low investment in equipment – high price of imported equipment, lack of hardware support for VC actors
- Fragmented markets – inefficiency of dairy value chain, high milk prices, lack of dairy market transparency
- Shortage of livestock extension agents
- Lack of focus on profitability (competitiveness)

Opportunities

- Beneficiary behavior – beneficiaries are ready to change, livestock keepers willingness to change from pastoralism to dairy, milk producers willing to join groups, acceptance of project initiatives
- Local market demand – availability of market for milk; availability of milk buyers
- Regional market - greater regional linkages; EAC economic integration; harmonized EAC milk and product standards –,
- Public private partnerships
- Platforms - availability of communication tools through DDF and innovation platforms; link regional platforms and DDF
- Technical solutions – effective solutions to cattle keeper problems

Threats

- Milk quality assurance – lack of enforcement of regulations and policies, not control of milk quality, dairy regulations need to be enforced, TDB is working toward establishing quality assurance systems
- Small traders system – dominance of small traders, dominance of direct sales from producers to consumers
- Fresh milk consumption – generic milk promotion, low milk consumption
- Import competition - imported milk powder sold at low prices
- Farmer conflicts
- Erratic rainfall
- Technologies not fit well in specific environments

The following table gives a summary of the results from the world café for recommendations development.

| Limitations | Changes | Recommendations |
|--|---|--|
| Need for enhanced role of development partners | Time and resource to source partners Coordination of partners through government organized platforms | Enhance CRP capacity for fund raising and strategy Improve budget process and design of budgets |
| Lack of sustainable engagement of private partners | Identify champions to take lead Ensure benefit of private sector | Design strategy to engage private sector |

| | | |
|--|--|--|
| Staff capacity within CG to do VC approach | Hire the right people | Review class ceiling for non PhDs; short term use of development experts |
| Staff capacity within partners to to VC approach | Needs and capacity assessment Capacity development for partners Follow up for impact | Create capacity development plans for partners |
| Stability of value chains paradigm | | |

Working Suggestions

The evaluators suggest that the value chain team takes steps to address the following issues and opportunities:

- Village and district level plans include capacity development components – can build on ACT approach and use FAO materials to reinforce “farming as a business” capacity building of extension agents, who then use to support village level planning
- Executive Director at SAGCOT should be a strong partner for initiatives related to inclusive value chains and farmer capacity development
- Many similar initiatives – could extend network for cross learning and then promote through high visibility forum by 2016
- Need sites in higher potential areas; or at least strong linkages with projects and businesses working in higher potential areas
- Establish a director level advisory group to raise visibility
- Work with SIDO and Tanzania agricultural processors association on strengthening of small processors and collectors

Annex H: Egypt Field Trip

Overview of Activities

Startup Staff Meeting

The startup staff meeting was held in Abbassa at the WorldFish research facilities, hatchery and ponds where the Abbassa strains of Tilapia are being bred. The meeting included program staff, including the Director of WorldFish in Egypt. After introductions, there was round-the-table discussion on the following topics:

- Scope and approach of WorldFish since the start of the program
- Comparative advantages relative to other research organizations
- Synergies between genetics, health and feed
- Adaptive research activities
- Stability of planning and reporting
- Balance between harmonized versus value chain specific approaches

Field trip to Kafr El Sheikh

A single, full day field trip was made to Kafr El Sheikh, the governate with the greatest aquaculture production and a major focal point for the program support for dissemination of new seed. The first meeting was a private hatchery that partnering with the program for broodstock multiplication and dissemination. After discussions, a short visit was made to visit the hatchery's grow out ponds. The next stop was a visit to the main wholesale fish market for Kafr El Sheikh. This was followed by a meeting with at the Community Development Association to discuss issues with one of the women retailer groups. This discussion focused on the range of program assistance and the group leader and members' views on future priorities.

Cairo Meetings

Meetings and issues discussed with collaborators and stakeholders were:

- General Authority for Fish Resource Development – overview of aquaculture sector development and sector policies; added value of WorldFish and program presence in country; recent changes in sector strategy and policies; soon-to-come changes in land leasing procedures; potential end markets besides street sales of fresh fish, priorities in the new agricultural sector strategy
- Union of Aquatic Cooperatives - what support the union provides to fish farmers, role in policy advocacy, priorities for aquaculture sector development, involvement in the program activities, marketing and finance issues affecting producers
- Agricultural Research Center – size and scope of responsibilities of the ARC, involvement in extension and post-harvest research, interest in agribusiness and industry development
- Embassy of Netherlands – impacts of political disruption, prospects for engagement in aquaculture sector development
- Swiss Development Cooperation – country program priorities, reasons for SDC bilateral support, perceived strengths of program approach, satisfaction with progress, implications of the funding gap in 2015

Wrap-up Workshop

The workshop started with self-introductions. This was followed by overview on the purpose and scope of the evaluation and the objectives and agenda of the workshop.

The first activity was a participatory SWOT exercise. To launch this exercise, a short presentation was given on the IEIDEAS project and the program impact pathways. This was done since several of the participants had not been actively involved in program or project implementation. The participatory SWOT exercise was used to facilitate plenary discussion on key issues impacting on the program and priorities for moving forward.

The evaluation team shared its own observations on program strengths and limitations, emphasizing the importance of understanding and responding to medium term sector dynamics, and the opportunity and need to consider more transformative strategies for farmed fish value chains.

This was followed by a short plenary session on partnering issues. The three issues covered were:

- Are the right research and development partners sufficiently involved
- Are the right partners for impacting on sector strategies and policies sufficiently involved?
- Are the right private sector VC actors sufficiently involved?

The last activity, as usual, was a world café for recommendations development. There were three groups, two working in Arabic and one in English. There were the standard three rounds of discussions, starting with limitations of the program's value chains approach, changes that should be made, and recommendations to the program managers and VCC. The results were shared and briefly discussed in plenary.

The workshop ended with a brief overview on next steps in the evaluation, including target dates.

Selected Findings

The following are selected findings from staff meeting, meetings with stakeholders, and the field trip:

- Not working with poor producers since cannot operate at small scale under current regulation; tried the poor as producers for catfish that did not work out; would have to change policy
- Production is well set up: input supply chain, good producer practices, consolidated production
- Seemed to be weaker working relations with research and extension than in other countries
- Mismatch of competencies – breeding but not others in sufficient amounts
- Project funding and deliverables have driven activities; not program strategy and approach; donor focus on employment has been a significant driver
- Performance criteria being used to assess improved strain are rather limited, being primarily related to growth rate and survival under highly controlled breeding conditions; field testing does not appear to cover all the possible desirable characteristics that might be demanded by different players
- Institutionalization of fish breeding, broodstock maintenance and management within government or private sector is not yet clearly articulated
- Value chain analysis did not explore in detail the relative efficiency of alternative value chains or possible new structures or products other than GI Tilapia
- Scaling in relation to women retailers, aquaculture development in new areas, and small scale household enterprise for women will depend on a thorough appraisal of the sustainability of these activities and their contribution to development goals, and the development of an effective scaling strategy
- Egypt lacks the equivalent of a fishery donor group to engage in major strategic thinking and coordination.

The results of the participatory SWOT exercise during the wrap-up workshop are shown below.

Strengths

- Improved strain (4)⁴⁸ – dissemination of improved strain (3); use of improved strain to increase farmer interest
- Capacity development (4) – ToT fish farmers BMP, improve skills of farmers (2), capacity development of value chain actors
- Multi-stakeholder participation (3) - wide participation of stakeholders (2); [O] - cooperation with different organizations on activities – multi-stakeholder

Weaknesses

- Environmental assessment (2) - does not cover environment; opportunity to do environmental impact assessment
- Biosecurity (2) - not measured; seed distribution from different location may carry pathogens not familiar to others, could increase mortalities = losses
- Financial sustainability (2) - no self-finance to BMP training; required resources – funds and staff
- Missed opportunities (2) - for innovation; to support activities such as infrastructure
- Applied in only five governates, not national level

Opportunities

- Policy voice (5) – increase farmer participation in decision making; participation of all stakeholders in policy making; participation of co-ops in sector development; create lobby through cooperatives to change policies; [S] positive role in sector development
- Cooperatives development / improvement (3) – fish farmer associations (2); enhance participation of stakeholders to cooperatives
- Address sector development needs (3) - need [for improved] fish farm management and [understanding of] pond dynamics; need to improve marketing ways; work on technology transformation on wide scale
- Improve data and information (3) - Good source of information and data; databases formation; need for on farm experiments and publications about the improved strain;

Threats

- Water use policies (4) - water use policy; policy don't allow use of freshwater for aquaculture; shortage of water; availability and access to water
- Lack policy voice (3) – wrong policy and laws; weak representation of VC actors in policy; [W] policies and laws need more clear attention
- No clear policy for fish disease
- Seasonality of supply – diminished returns at harvest period
- Increase of prices of imported materials
- Need for long term pump priming
- Not participation from other institutions – ministry of agriculture

The results of the world café for recommendations development are summarized below.

Group 1

| Limitations | Changes | Recommendations |
|---|--|-----------------------------------|
| Failure to address governance of sector | Enhance coordination between institutions; upgrade and enforce legislation | Gather policy makers in meeting |
| Costly approach to implement | Adopt less costly approach; | Efficient management of resources |
| | Get donor funds | Develop proposals |
| Does not address environmental | Consider environmental issues in | Partnership with environmental |

⁴⁸ Number of cards in topical cluster

| issues | all stages | ministry |
|---|--|---|
| Need stronger networking for stakeholders | Engage with partners to support networking | Appoint public relations Database to help networking |
| Poor representation of stakeholders | Deal with aquatic union, chamber of commerce, industrial union | Establish contacts with more VC actors |

Group 2

| | | |
|--|---------------------------------|----------------------------------|
| Sustainable funding for VC approach | Fund raising | Develop proposals for new donors |
| Limited value addition chains | Market analysis and development | Mobilize new partners |
| Inability to solve water and land use policies | Policy advocacy | Facilitate dialogue |
| Affected by unstable political situation | | |

Group 3

| | | |
|--|---|--|
| Resources required to study entire value chain | Find funds for projects; mobilize through partnerships | Good proposals |
| Difficulty to create and implement new policies | Work on updating and enforcement of laws | Work through cooperatives |
| No focus on post-harvest issues | Support for developing and applying quality standards Apply quality control in markets | Develop and apply postharvest BMPs along value chain |
| Failure to deal with sharp increase in production inputs | Find alternative inputs and support better management | Cooperation with research institutes to find alternatives |
| Reliability of available databases | Establish database for aquaculture VC | Cooperation among different public and private data source organizations |

Working Suggestions

The evaluators suggest that the value chain team takes steps to address the following issues and opportunities:

- Analysis of the business and market opportunities open to women retailers, and their competitive advantage as individuals or groups
- Research and dialogue to develop a future vision of probable market dynamics
- More attention to market development, post-harvest technologies, sub-sector policy and governance
- Opportunities to improve market information for both buyers and seller at all points in the value chain, and the likely impact of such information on business performance
- More concerted attention to land and water access and use policy
- Mechanisms (market and regulatory) to increase quality and cost-effectiveness of feeds yielding benefits throughout the value chain;
- Cost effective options to improve logistics and maintain product quality
- Innovative value chain transformations that might benefit the poor

Annex I: List of People Met

Ethiopia

Partners, Collaborators and Stakeholders

Susan Minae, FAO Representative at interim, FAO
Getinet Assefa, Director, Livestock Research, Ethiopian Institute of Agricultural Research (EIAR)
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Girma Abebe, USAID Livestock Marketing Development Program
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Bewket Siraw, Director (veterinary services), Ministry of Agriculture
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Barbara Szonyi, ILRI, SFFF
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David Kyakonye (Wambizzi abattoir)
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Francis Ejobi, Head, Department of Biosecurity, Ecosystems and Veterinary Public Health, Makerere University
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Lawrence, DVO Masaka
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Gideon Nadiope (Pig Specialist), VEDCO
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Christopher Mulindwa (Pig Production Marketing Ltd)
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Egypt

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Nairobi

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Jurjen Draaijer, Global Dairy Coordinator, SNV

ILRI Management

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Suzanne Bertrand, Deputy Director General, Bioscience
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Karen Marshall, Animal Breeding and Genetics, ILRI
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Catherine Pfeifer, GIS analyst, ILRI
Isabelle Baltenweck, agricultural economist, ILRI

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Maureen Miruka, Team Leader, Pathways Program, CARE USA
Rohana Subasinghe, Senior Aquaculture Officer, FAO

Annex J: Program Documents Reviewed

CRP Proposal

More Meat, Milk and Fish by and for the Poor, A Proposal Submitted to the CGIAR Consortium Board by ILRI on behalf of CIAT, ICARDA & World Fish, 2010

Animal feeds component: Background proposals for the CGIAR Research Program on Livestock and Fish, 2011

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Livestock and fish genetics component: Background proposals for the CGIAR Research Program on Livestock and Fish, 2011

Pig meat value chain in Vietnam: Background proposals for the CGIAR Research Program on Livestock and Fish, 2011

Smallholder pig production and marketing value chain in Uganda: Background proposals for the CGIAR Research Program on Livestock and Fish, 2011

Sheep meat value chain in Ethiopia: Background proposals for the CGIAR Research Program on Livestock and Fish, 2011

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CRP Livestock and Fish, 2012 cross-cutting report - Partnerships

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Annex K: Summary Survey Results

Program Staff Survey

Closed-ended Questions⁴⁹

| Statement | Agree | Neutral | Disagree | % Agree |
|--|-------|---------|----------|---------|
| 1. The program level theory of change and impact pathways are clearly articulated | 29 | 13 | 2 | 66 |
| 2. Assumptions underlying the program level theory of change and impact pathways are valid | 24 | 18 | 2 | 55 |
| 3. The value chain impact pathways are sufficient for assessing research priorities | 22 | 17 | 5 | 50 |
| 4. The value chain impact pathways are sufficient for assessing progress in developing appropriate value chain interventions | 20 | 17 | 5 | 48 |
| 5. Improving productivity and efficiency in smaller-scale production systems will make the most effective contribution to increasing supplies of animal source foods available to the poor | 16 | 12 | 13 | 39 |
| 6. Strategy for selecting value chains is consistent with the need to generate global public goods | 26 | 15 | 3 | 59 |
| 7. An appropriate research agenda has been articulated for validating the methodology for selecting target value chains | 19 | 19 | 6 | 43 |
| 8. There has been effective and efficient collaboration and coordination among the partner institutions | 27 | 14 | 3 | 61 |
| 9. There has been effective and efficient collaboration and coordination with other CRPs | 15 | 21 | 8 | 34 |
| 10. There has been effective cross-site comparison and learning | 6 | 24 | 14 | 14 |
| 11. Transaction costs incurred by the participating institutions and partners have been acceptable and worthwhile | 11 | 22 | 11 | 25 |
| 12. Financial and human resources have been available in the quantity and time planned | 16 | 9 | 18 | 37 |
| 13. An appropriate research agenda has been defined for the social sciences of value chain development | 18 | 17 | 9 | 41 |
| 14. The value chain approach has helped identify and prioritize demand for new technologies | 25 | 11 | 7 | 58 |
| 15. Appropriate attention been given to views and needs of the value chain actors in defining the research agendas | 23 | 19 | 2 | 52 |
| 16. Use of a value chain approach has increased relevance of the research agenda for pro-poor value chain upgrading | 31 | 11 | 2 | 70 |
| 17. The program has conducted research on entire value | 11 | 15 | 17 | 26 |

⁴⁹ Horizontal lines separate sub-questions for the ten evaluation questions. Right column shows the percentage of respondents who agreed of all respondents. Blue shading is added for convenience to highlight questions for which there was on moderate levels of agreement; orange shading highlights questions for which that were low levels of agreement.

| | | | | |
|---|----|----|----|----|
| chains | | | | |
| 18. Research agendas reflect attention to areas of CGIAR comparative advantage relative to other research suppliers | 26 | 12 | 5 | 60 |
| 19. There has been effective and efficient collaboration and coordination between managers of VCD and other thematic components | 16 | 16 | 12 | 36 |
| 20. Use of a value chain approach has led to changes in the scope of issues being addressed in animal genetics, health and feeds research | 24 | 15 | 5 | 55 |
| 21. The value chain agenda effectively informs and draws from the program's technology themes | 19 | 18 | 7 | 43 |
| 22. Transactions costs for developing the research agendas within the program's multidisciplinary approach have been acceptable | 12 | 22 | 10 | 27 |
| 23. There have been clear benefits from the program's multidisciplinary approach | 25 | 14 | 3 | 60 |
| 24. There is a sense of shared ownership of and responsibility for program success and outputs among the program partners | 24 | 13 | 5 | 57 |
| 25. Roles have been clearly defined for research and development partners | 17 | 16 | 9 | 40 |
| 26. The capacities and skills of each partner organization are being fully utilized and leveraged | 13 | 23 | 8 | 30 |
| 27. The Program has been effective in tapping into the research and business expertise of the private sector | 8 | 21 | 15 | 18 |
| 28. Program has identified pro-poor and gender responsive technological innovations | 21 | 17 | 6 | 48 |
| 29. Program has identified pro-poor and gender responsive institutional innovations | 16 | 18 | 10 | 36 |
| 30. Program has identified policies and strategies for improving access to essential services | 16 | 23 | 5 | 36 |
| 31. Private-sector provision of services for the target value chains has improved as a result of the program | 8 | 26 | 10 | 18 |
| 32. Realistic strategies for mobilizing resources for value chain upgrading has been developed | 10 | 18 | 15 | 23 |
| 33. Level of investment needed for value chain upgrading has been sufficient | 2 | 21 | 21 | 5 |
| 34. Level of resources committed to capacity development has been sufficient | 8 | 22 | 14 | 18 |
| 35. Strategies for capacity development have been appropriate | 10 | 25 | 9 | 23 |
| 36. Capacity of value chain actors and service providers has improved due to Program interventions | 13 | 26 | 5 | 30 |
| 37. Small and medium scale agro-processing enterprises have increased value addition and efficiency as a result of the program | 6 | 25 | 13 | 14 |
| 38. There is improved coordination along the value chains due to Program interventions | 18 | 20 | 6 | 41 |
| 39. Interventions identified can go to scale within the next 4-5 years | 21 | 20 | 3 | 48 |

| | | | | |
|---|----|----|----|----|
| 40. Full range of issues necessary to ensure uptake of the interventions has been identified | 15 | 12 | 17 | 34 |
| 41. National policies are conducive to increasing private sector investments in smallholder livestock and fish value chains | 11 | 18 | 13 | 26 |
| 42. Realistic strategies and mechanisms for scaling-up and scaling-out have been identified | 14 | 15 | 15 | 32 |
| 43. The program has effectively harnessed the growth of the private sector and the increased dynamism of markets in its support for value chain upgrading | 5 | 24 | 15 | 11 |
| 44. Appropriate evidence has been generated on the benefits the interventions | 11 | 20 | 13 | 25 |
| 45. Research has been designed to ensure inclusiveness of resource-poor smallholder farmers, especially women and youth | 28 | 13 | 3 | 64 |
| 46. There has been an appropriate balance in the attention given to the program's intermediate development objectives | 26 | 16 | 2 | 59 |

Closed-ended Questions

1. What are main differences in the LF CRP country level work compared to previous CGIAR support to national research and development programs?
 - Current work is more wide based specially by taking the value chain approach the covers the whole extent of the value chain
 - Wider research scope based on various actors' needs compared to previous system, where research focusing only on production stage
 - LF CRP is more inclusive and targets the entire value chain
 - Value chain approach, including considering final consumers of the products stronger linkages with development agencies
 - LF CRP has a more holistic approach, considering not only technology interventions, but others that are expected to have impact in the performance of the VCs that are the focus of the program
 - More value chain oriented
 - More attention to working along the value chain
 - In the former case, the whole value chain approach has been applied while the support to national research and development programs had focused on specific components especially at the production level; a major contribution of the CGIAR support to national research and development programs has also been through capacity building of national staff in NARS
 - New approach created cooperation among CG centers
 - CRPs are indented to increase the synergies of a multi-center approach though a clearly defined research thematic
 - More coherent programs of work as opposed to multiple disconnected projects (building coherence is still a work in progress)
 - A more concerted approach across the various elements of the VC; also a stronger emphasis on institutional issues, stakeholder engagement
 - The actual working in interdisciplinary teams to achieve outputs; focus of all disciplines around the same challenge within specified areas
 - L and F has clearer focus on flagships with outputs and outcomes
 - More focused around development challenges, more attention to partners
 - Country level work is more focused, so involvement of national research and development programs are also strategic

- Marginally greater focus via value chain approach
 - LF CRP has a better focus, is long term in nature
 - More focus on demand-driven research
 - Focused but only in limited and isolated countries
 - Focus in a given country and value chain approach
 - More focused efforts; research is connected onto a wider agenda
 - Opportunities for sharing learning and lessons between countries
 - Previously it was mainly project level bi-lateral work; now it is more integrated designed for long term vision
 - Under L&F, permanent country level presence of staff rather than intermittent visits in selected value chains has been established; demand articulation has been systematic and more inclusive of stakeholders; however, due to attention to research design and rigorous validation protocols that are in place, progress to reaching fully validated integrated products has been 'slow'
 - Inclusion of more CV stakeholders (farmer cooperatives) stronger collaboration with other CG Centers interventions more focused at value chain; higher level of partner engagement; real attempt to address issues across the VC / sub-sector, rather than isolated issues; full VC / sub-sector characterization (as opposed to characterization on specific issue) but unsure if this has been informative in terms of which intervention packages to process with
 - They are more participatory and system (value chain) focused
 - Programs are more targeted and potential for development clearly identified. Relied on a holistic and more integrated approach; priority given to equity, learning, and sharing among and between stakeholders
 - The CRP approach is more targeted and works with several stakeholders
2. What is new or different about the animal science innovations now receiving priority attention?
- More attention for genetic improvement
 - Utilization of novel diagnostics and vaccines, improved strains
 - Strong fish genetic improvement plans are being implemented. Fish health is being addressed better
 - Current theme capturing technology with its backward and forward linkages
 - Focus on production and consumption by the poor, although large scale commercial culture also is important in supply of fish to the poor or creation of employment
 - More emphasis on ability to demonstrate impact of the work being done by adopting TOC and results chain approach
 - Actor feedback is highly considered in setting research priorities
 - Seed quality improvement and feed interventions are new interventions related to animal science innovations
 - Studying the whole value chain not only the commodity
 - Integrated approach, and genetic components
 - More focus on consumer demand and human nutrition
 - They are embedded in the value chain context
 - None in animal health, particularly vaccine development; difficult to discern in genetics work; don't know about feeds
 - More funds for research; more research work in the value chains for concerted effort leading to better impacts; mostly working on same innovations as previous; production system / location may however be different
 - Operating as a research organization instead of some kind of a consulting firm; basic research is critically important; the emphasis on animal science innovation provides that opportunity
 - There is more attention to the importance of innovation platforms
 - Not really different to before

- In the past the expected impacts of the innovations were analyzed mostly in the farm context, now it is clear that impacts of innovations are not only dependent on how good is the technological innovation, but considers implications on gender, the role input and service providers could play in the implementation beyond the trials, and how other actors in the value change (post-farm) could benefit/affect the success of the innovation
- The integrated approach of working on animal health, feeds and breeds simultaneously
- More relevance to addressing challenges in the field
- Nothing new but this is expected; CRP is about the improvement of productivity and income generation of smallholders
- More impact oriented
- Technology approaches have been largely excluded from the core value chain approaches in CRP3.7 which focus primarily on policy initiatives; some technology research continues but it is not well integrated into the chosen livestock species and country specific value chains
- Innovations are now actually focused around needs identified in the countries--rather than only "blue-sky" and "favorite topics"; adaptations must be made for innovations to be practical and simple enough to be used
- Better relationship to the value chain
- Value chain approach
- Not much, animal health issues remain as they were, mainly on infectious diseases; would like to see more focus on herd health
- Research demands are becoming more localized than before
- Deeper consideration of the implications of progress in one area of animal science, say health, for other areas (feeds and feeding, genetics) and including for social dimensions - gender, nutritional statuses, poverty, market opportunities, etc.; packaging of breakthroughs to integrate the above considerations has become more important than isolated work in any single discipline
- Taken singly, nothing is new regarding the animal science innovations; however its link within the value chain framework is what may be considered as new

3. What are the LF CRP areas of comparative advantage relative to other research and knowledge suppliers?

- Access to global available knowledge (other partner CG centers) access to experiences in other value chains available resources and specific focus of LF allow for more effective research
- Opportunity to engage expertise from different CGIAR institutions
- Competent hard working scientists willing to come and work alongside of nationals; frank honest assessments of work
- L&F concept can be implemented at the household level to boost the production, income and nutrition of the poor section of the community
- Interaction of experts from fish and livestock sector on feed and possible other areas
- Connection to the field - location in countries via field offices is key
- Gender awareness, development oriented, IDOs responsive
- Research program is based on sector need and use of theory of change approach
- L and F is commodity focus and has very clear deliverables which would result benefits for the poor and marginal households
- Global view
- Ability to bring together diverse scientific expertise and partners
- The whole value chain approach?; probably also comparative advantages in some specific technology research areas within animal health, genetics, and feed/forages
- Pro-poor focus and the intentional design to build strategic partnerships with development partners for scaling out

- Critical mass and presence in country locations; good links with national partners and a good bridge between NARS and advanced research institutions
 - Ability to work in multiple global locations but this not being capitalized upon as we don't seem to have created a proper team and team spirit around a coherent and focused research agenda
 - Animal health – diagnostics, bovine immunology, vaccine, genetics; facility – technology platforms, services, location; “technology persons” who are interdisciplinary thinkers and knowledgeable on development issues
 - Integrated approach and the availability of scientist of various backgrounds within ILRI
 - Adequate research-based knowledge of the pig value chain in Uganda despite little information available from government ministries
 - Brings together all stakeholders along the value chain
 - Multidisciplinary team; focus on smallholders and poor/marginalized
 - Involves inter-disciplinary and multi-institutional teams, which allows tackling the constraints and opportunities identified in the VCs in a more holistic approach; also, being a program that is not led by national institutions, makes more feasible that different institutions could participate
 - Inter-disciplinarity
 - High level science and facilities in immediate location
 - Full set of expertise on LF production with a focus on regional and international importance.
 - Experience along different points in value chains, science to development
 - Strong opportunity for linking technological science to value chains
 - We are moving into areas in which international organizations (FAO etc.), NGOs and NARs would be better placed to deliver and the comparative advantage is limited; niche of the CGIAR should be rather more strategic, although clearly we do need to work closely with development partners for delivery
 - Advanced knowledge, expertise and experience in handling challenges of developing countries from the perspective of different disciplines –notably in technical fields of animal health, animal genetics and breeding, bio-statistics and socioeconomics
 - Commitment to work along the value chain; VC work supported by technical competence; commitment to publish results of research
 - As a source of cross-country learning
 - That it is conducted with a framework of a supply and market chain; it brings together diverse elements of a system that otherwise would have been disconnected
 - The CRP seems to have greater access to reliable funding
 - The value chain approach adopted by L&F provides it better understanding of the wider range of issues involved in value chain upgrading compared to other research approaches that tend to focus on one or two nodes of the chain in different locations
 - The approach using extensive cross-cutting research and team of scientists
 - Value chain and systems analysis using new methodologies and linkages to livelihood outcomes (ex-ante assessments, monitoring and learning); research on vaccines for prevalent livestock diseases; networks and linkages to development organizations
4. Do you feel that the disciplinary competencies are okay? What changes would you make if changes were possible?
- In general OK more specific attention to market access for small farmers
 - It would be good to hire more social scientists in the teams or ensure some social studies background when hiring technical staff
 - Encourage recruitment of more staff at the field level to work closely with our primary stakeholders (farmers and value chain actors)
 - Need more interactions among those who involved in the programs, still it is done more linking with the bilateral program which is difficult to differentiate for the L & F program

- Not just okay, they are excellent
- Okay
- Yes, just need more time for cross disciplinary work, to build common language, understanding
- OK for the time being; it would be worthwhile to reassess towards the end of the first project phase
- Ok
- Need to improve number of personnel
- Ok, but more centers interaction would be more beneficial
- Ok, but insufficient investment across the necessary disciplines; focus W1/W2 funds on core areas of scientific priority; create a better balance between L&F core funds for core science, bilateral projects and responsibilities and commitments of research and development partnerships; some gaps can be filled with better use of partners
- Still short of interdisciplinary efforts; skills, competencies may be short in some quarters, but equally important is the lack of drive to work in an inter-disciplinary more; takes time to change organizational cultures from within; bring in / recruit more scientists and development practitioners with interdisciplinary experiences
- Program needs to have a strong innovation systems expertise in the disciplinary competencies available
- Technology competencies are ok; there is a crying need for more social science expertise e.g. on innovation systems, policy engagement etc.
- No; need stronger social science competence and greater innovation
- Could be strengthened and more interactive
- Lack of disciplinary competencies in VC transformation, impact pathways and business model development, in particular
- Fine; decentralizing the decision making process would be very helpful
- Sufficient
- Okay
- Need for agribusiness skills; need one production person instead of feed, AH and genetics separate – farmers implement packages of interventions; need for nutritionists
- Depends of the different VC teams operating in each country; in those countries where there are bilateral funds supporting specific VC projects is easier to have the needed disciplinary competencies in place; it is not easy to involve researchers from headquarters, because they have their own research agendas, and maybe a small percentage of their time allocated to the VC work
- More disciplines located where the VCs are
- Yes
- Yes; more focus on regional issues
- Opportunities for applying disciplinary competencies greater constraint
- Increase the number of VC economists and business development specialists; to ensure transparency and accountability considerable more staff with M&E skills need to be hired; technical flagships needs to be scrutinized, there is far too much blue sky research ongoing at great expense with very little short or medium term impact potential
- Key issue is not the disciplinary competencies per se but how these can be integrated into a comprehensive package that includes all of the diverse expertise from the participating institutes; for example has there been any 'ground truthing' of health constraints in VCs using diagnostics, or is the entire analysis based on farmer surveys, which are important but inevitably do not provide a complete picture .
- Competencies are okay, only numbers of people with expertise are few and expectations are high-- leaving little opportunity for new thinking and exploration of options
- More innovation needed for VC transformation; agricultural economist skills needed
- Strengthen inter-disciplinarity and agribusiness competencies
- Science discipline work is good, but could be broader; need greater competence in social analysis, and the way in which innovations adapt within social contexts

- Has been a great change improvement in the level of collaboration; however, attitudes towards embracing of novel approaches outside disciplines is still low
 - The design of the CRP has the relevant disciplinary competencies recognized and mapped; however, in practice, it has lacked some of these human resources in certain areas notably in innovation systems research input
 - Yes they are ok but we need more human resources in field research such as Epidemiology, agribusiness and social science
 - Need stronger linkages with IFPRI for policy analyses; need for undertaking "Research on Development"; research on platforms can be part of social sciences research agenda focusing on cross country and cross actor assessments
5. How can CG scientists supporting adaptive research and VC development keep market value as scientists?
- First condition is that there should be enough scope and room for research leading to publications (often not the case)
 - Scientists should be in a position to utilize the research information and data generated to identify critical drivers for change/improvement, publish such information for wider audience
 - CG scientists are interested to do this but these are not very clear to us
 - Scientists are not able to disseminate any solid evidence in the line of value chain; it needs more time to create outcomes
 - Research with practical outcomes is also research, and is more difficult to achieve than theoretical research
 - Ensuring time for publishing
 - Continue to be innovative and closely attached to the scientific communities and science events and through innovations platforms adopted by CRP
 - VC enable identify sector needs across the chain, which gave lead to CG scientists, plus adopting innovation platform open new area for research
 - Gathering all researchers in periodical conference/workshops for each CRP
 - CG scientists are unlikely to keep market value as scientists if doing VC development work; balance of science to development needed, and right skills applied
 - They can't, if they are being evaluated on scientific outputs but are required to work on development-oriented functions
 - Very tricky; use of students could be one way but no getting round the fact that publishing this kind of stuff is challenging - it is too messy and context specific
 - Not sure; value of R4D needs to be recognized and the niche of applied research appreciated/recognized and rewarded
 - By combining effort alongside value chains, scientists will be efficient to quickly make impact and therefore become more visible competitive on the market
 - Don't know, except possibly as R4D scientists
 - Through better science, produce good publications, things of that nature
 - By coming up with more action research; this will bring about immediate change in the communities where interventions are being piloted
 - By building capacity and utilizing the private sector
 - Publish
 - By providing evidence on what doesn't work, what works and why it works (or doesn't work); there are a lot of case/ success stories on VC upgrading, but we need stronger evidence
 - The answer will differ depending on the area of expertise of those scientists; will be easier for economist, gender specialist, and others in the social sciences; more difficult for the ones in biological sciences; it is difficult to publish results of adaptive research in most of the traditional journals where biological scientists usually publish

- Difficult; maintaining a balance between adaptive and basic research
 - Identify common issues in regional context and provide technical support
 - Do not see any contradiction here
 - Don't see this as an issue since 'adaptive research' is a valid form of scientific enquiry
 - In the case of biotechnology research this is a very difficult issue; part of the answer is to seek bilateral funding for additional strategic work, but this is not easy under the current CGIAR full cost recovery rules and at the very large scale required to meet infrastructure, managerial and overhead expenses
 - Opportunities should be provided for at least one to three month sabbaticals to other institutions once every 3 years--to enable adding value to scientists; collaborations and partnerships with other advanced research institutions in projects with some scientist exchange of time should be encouraged
 - By using scientific rigor to report and document the results of research
 - On-going challenge that could be addressed by catalyzing journals dedicated to promoting inter-disciplinary and adaptive research approaches
 - By committing resources to adaptive research methods; there seems to be an allergy towards action research for instance; it is deemed to be a loose and popular form of enquiry that is not robust; it is however one of the few instruments we have to assess adaptation
 - Should continuously ensure that final beneficiaries remain part of the knowledge systems
 - By doing quality research
 - Research in the new areas such as innovation platforms and Innovative business models that can work for the L&F value chains; focusing on governance issues such as public-private sector issues
6. What needs to be done to support scaling to new areas and new countries?
- Systematize experiences and results up to present; resource mobilization; develop methodologies for scaling but still very early to do this
 - Validate the approaches and work closely with national development agencies, NGOs, and target stakeholders to disseminate the technologies and approaches
 - Just stick to the plans we made
 - Program needs more evidence in all current program countries before replicating to other countries
 - Good documentation of how it was done and what the costs and benefits are
 - Continued comprehensive dialogues through innovation platforms
 - Communicate activities outputs and outcomes
 - Strengthening partnership with public and private sector stakeholders
 - Centers cross visits and workshops
 - Partnerships, better balance between the VC "experiments" and technology platforms feeding into wider geography
 - Partnerships, partnerships, partnerships especially with the private sector and communicating out better what we are doing
 - Scoping studies that show potential for uptake and impact of the interventions that work in the VC focal countries; strong network of partners to support this and the scaling out agenda
 - More funds would help; current emphasis should be on consolidation of existing countries
 - Engage sooner with development partners and be far more proactive in approaching them rather than letting them emerge; need to have a research agenda for scaling and develop a measurement system for measuring transformation
 - All the stakeholders especially the poor and the NARS should actively participated to the program from the start to the end in order to become the ambassadors during the scaling to new areas
 - Improved L&F CRP internal capacity on VC / sub-sector approaches and business models; strong reflection on learning lessons from the VCs, including re-evaluation of the 'characterization first' approach

- Looking at both demand potential and animal resource endowment when selecting a value chain; this may even include strategy such combining countries for one value chain; for instance for small ruminant in West Africa, Senegal would have been a great place to work; integrating Mali and Senegal value chain
 - Need to adopt a development approach, too much research without direct impact for the communities reduces goodwill and enthusiasm among the people
 - Proper assessment of where potential exists for success
 - Providing the evidence; nurturing relationships with development actors and decision makers
 - Good results and proper communication of the findings; share results in regional and international forum
 - Stronger partnership with funding agencies that set country priorities
 - Implementation in the target countries needs to be effective to enable scale out
 - Identify opportunities and incentives of partners to become actively involved
 - Creation of IPGs and finding suitable partners needs much more emphasis; wonder if we should not reduce the number of VCs we are working in so we can provide a more appropriate amount of funding for each
 - Use a model that draws on analysis of the global expertise in value chains for prioritization of key research areas and interventions; current approach of in-depth investigation in selected very specific VCs will create difficulties for translation into true global international public goods and utilizes very considerable amounts of institutional resources for a narrow agenda
 - Would be good to have an on-going forum aimed at targeting and foresight with participation of various LF team members, that brainstorms and prioritizes on options and opportunities in new areas and countries
 - Need to identify markets that will benefit from VC upgrading and can go to scale
 - Generation of strong evidence, strong partnerships from the onset, and capacity development
 - Building collaboration agendas with multiple stakeholders at the start of the research process; this will assure the right level of ownership to allow for intrinsic agendas to come into play
 - Need to increase management capacities in the target value chains; program is already over stretched – focal value chains should be reduced to a small manageable number
 - Continued rigorous experimentation, joint testing and validation with stakeholder and partners to come up with really good products; this may be slow and tough but good products will attract development partners to invest and be part of catalyzing adoption and scaling within selected value chains as a first step and then beyond
 - Strategies should be identified early and piloted
 - Stronger partnerships, especially with private sector players; catalysing supportive business environment and institutional frameworks
7. What might be ways to strengthen cross-site and cross-value chain learning?
- More exchange of staff (although this implies more transaction costs); "permanent" and cross-site visits (the latter also including VC actors along the whole value chain); systematic documenting of value chains (although WIKI site provides already a good platform for this)
 - Exchange visits, publication of findings, meetings and workshops
 - Ability to link grass root level producer to the corporate sector retailers
 - Exchange visits
 - Annual meetings that L&F organizes bringing people together across VCs and themes are useful for this - to make connections that individual VCCs and others can continue
 - Exchange visits to share experience and practice between sites and VCs
 - Mutual visits, close cooperation or involvement in research and exchange publications
 - Through involving all stockholders at all stages of the program
 - Multi-stakeholders workshops
 - Recognize its important, and invest in it

- Cross-site visits; establish a Value Chain Coordinator Community of Practices that regularly communicates and exchanges experiences; having said that, many Value Chain Coordinators may see that as an extra 'burden'
 - Ensuring that teams working in these VC are communicating and there is a mechanism to enable regular interactions
 - Commission cross-country studies; sponsor PhD studentships to look at specific issues across country
 - Dedicated time and activity for this type of work; encouraging blogging/social media to share insights
 - Workshops, site visits, meetings, exchange and sharing of material and documents
 - People involved in more than one VC (this is already happening to an extent); specific activities (e.g. workshop) on this issue
 - Complementarity between sites in different countries; similarly within a country as well
 - Complementarity would be a great way to learn different things
 - Exchange visits for staff and partners to the model sites to encourage peer learning
 - Investing more on cross site activities
 - Exchange visits of VC actors (not scientists!) as they will see things we don't see
 - Most L&F meetings are basically for planning, and less on opportunities to share lessons learnt; teams worked together on the development/adaptation of tools for VC assessment, but there is a need to work on methodologies that applies what has been found in the VC assessments, i.e., best-bet selection, action research methods for testing interventions
 - Common planning
 - Very difficult as people are over committed and always hunting for funding, limited time left for research on specific issues
 - Generating something that can be compared would be a good 1st step; very few value chains are actually implemented
 - Standardize approaches and analyses
 - M&E in the VCs needs to be strengthened so that someone is thinking about this at the local level; however, we are moving in the right direction with our MEL approach and that it will eventually start producing this sort of learning
 - Some technology innovations may be generic (e.g. application of mobile phones in agriculture); my perception is that this is not a current focus of CRP3.7.
 - Positive information sharing across teams; joint planning
 - More interaction between sites
 - Study tours and exchange visits; also crystallizing what is generic in the promotion of L&F value chains
 - A culture of learning and sharing work and evidence, plus an architecture that supports this
 - Implementation of studies across value chains in similar themes such as approaches and frameworks
 - Developing and implementing a communication strategy that includes virtual and physical meetings across platforms and flagships would be helpful; the wiki could have been marvelous but not enough stakeholders including CRP scientist willingly and routinely visit the site
 - We need real collaboration and open up to each other; site visits should be initiated and budgeted for by the CRP
 - Conducting similar value chain work across sites, e.g. the pig value chain in Vietnam and Uganda
8. In cases where VCD progress has met or exceeded expectations, what have been important success factors?
- Sufficient resources available (often through bilateral projects); effective involvement of development partners; history of on-going related work
 - A strong country team that coordinates their actions together
 - Good team work, dedicated field staff, and clear understanding of the aspirations of value chain actors and constraints faced by them
 - Constraints identified, plans made to overcome the constraints, plans implemented already

- Demand driven, profitable, work with private sector
- Availability of needed resources and sufficient background information and experience in the VC and strong committed and dedicated partnerships
- Good baseline study; proper project planning and adopting team work approach in program implementation
- Better planning, follow up and leadership
- Team working and the emerging leadership skills
- Good buy-in from private and public partners, good participation
- Having well-funded, well-aligned development projects in place around which we can do/add the research needed; having capable Value Chain Coordinators
- Good people leading
- Prior history and bilateral funding; better and more strategic/insightful leaders
- Combined and concerted efforts
- These appear to be VCs where work was already on-going prior to the initiation of the L&F CRP, thus action research could proceed whilst the VC characterization / assessments were taking place
- Early start, more involved stakeholders, good support from within, staffing as well, and absence of civil strife
- Good will from government and local actors, a people-focused approach to research and development
- Better coordination in the VC
- Leadership of the VC coordinator; trust between CG and other partners so that we don't discuss budget but issues
- Opportunities for close and effective interactions among members of the different VCs
- As a research institution, publications on critical regional issues should be the most important; otherwise it is too hard to evaluate one's performance in general
- Good targeting, good and comprehensive diagnosis, careful prioritization
- Long-term involvement - good partners
- Bilateral funding of specific projects to address VC issues identified
- Availability of resources to carry out the work.
- Funding, experience and passion to catalyze strong R&D partnerships within the value chain and with CGIAR research providers
- A good local leader; one who can bring the right people together, to frame the right agenda, and evolve this over time
- Previous connections of managers and at times going moving faster than the CG conceptualization of how to manage the change
- Good (multi-disciplinary) team on ground, participative consultation including public and private sector stakeholder, new alliances for common course, at least one product in hand for testing
- Effective private sector partnerships, supportive policy environment, effective markets and other business development services

Collaborator and Stakeholder Survey

Closed-ended Questions

| Statements | Agree | Neutral | Disagree | % Agree |
|--|-------|---------|----------|---------|
| 1. There has been effective and efficient collaboration and coordination among the partner institutions | 22 | 2 | 2 | 85 |
| 2. Transaction costs incurred by the participating institutions and partners have been acceptable and worthwhile | 14 | 9 | 3 | 54 |

| | | | | |
|--|----|----|---|----|
| 3. Financial and human resources have been available in the quantity and time planned | 16 | 9 | 1 | 62 |
| 4. The value chain approach has helped identify and prioritize demand for new technologies | 17 | 9 | 0 | 65 |
| 5. Appropriate attention been given to views and needs of the value chain actors in defining the research agendas | 17 | 8 | 1 | 65 |
| 6. Use of a value chain approach has increased relevance of the research agenda for pro-poor value chain upgrading | 19 | 7 | 0 | 73 |
| 7. The program has conducted research on entire value chains | 8 | 13 | 5 | 31 |
| 8. Research agendas reflect attention to areas of CGIAR comparative advantage relative to other research suppliers | 13 | 12 | 1 | 50 |
| 9. Use of a value chain approach has led to changes in the scope of issues being addressed in animal genetics, health and feeds research | 18 | 7 | 1 | 69 |
| 10. The value chain agenda effectively builds on the program's technology themes | 19 | 6 | 1 | 73 |
| 11. There have been clear benefits from the program's multidisciplinary research approach | 15 | 10 | 1 | 58 |
| 12. There is a sense of shared ownership of and responsibility for program success and outputs among the program partners | 15 | 8 | 3 | 58 |
| 13. Roles have been clearly defined for research and development partners | 15 | 9 | 2 | 58 |
| 14. The capacities and skills of each partner organization are being fully utilized and leveraged | 12 | 11 | 3 | 46 |
| 15. The program has been effective in tapping into the research and business expertise of the private sector | 9 | 14 | 3 | 35 |
| 16. Program has identified pro-poor and gender responsive technological innovations | 11 | 14 | 0 | 44 |
| 17. Program has identified pro-poor and gender responsive institutional innovations | 8 | 17 | 1 | 31 |
| 18. Program has identified policies and strategies for improving access to essential services | 15 | 9 | 1 | 60 |
| 19. Private-sector provision of services for the target value chains has improved as a result of the program | 13 | 9 | 4 | 50 |
| 20. Level of resources committed to capacity development has been sufficient | 6 | 18 | 2 | 23 |
| 21. Strategies for capacity development have been appropriate | 13 | 9 | 3 | 52 |
| 22. Capacity of value chain actors and service providers has improved due to Program interventions | 9 | 13 | 4 | 35 |
| 23. Small and medium scale agro-processing enterprises have increased value addition and efficiency due to Program interventions | 8 | 10 | 8 | 31 |
| 24. There is improved coordination along the value chains due to Program interventions | 15 | 8 | 3 | 58 |
| 25. Interventions identified can go to scale within the | 13 | 11 | 2 | 50 |

| | | | | |
|---|----|----|---|----|
| next 4-5 years | | | | |
| 26. Full range of issues necessary to ensure uptake of the interventions has been identified | 13 | 10 | 2 | 52 |
| 27. National policies are conducive to increasing private sector investments in smallholder livestock and fish value chains | 14 | 10 | 2 | 54 |
| 28. Realistic strategies and mechanisms for scaling-up and scaling-out have been identified | 9 | 15 | 2 | 35 |
| 29. The program has effectively harnessed the growth of the private sector and the increased dynamism of markets in its support for value chain upgrading | 13 | 10 | 3 | 50 |
| 30. Appropriate evidence has been generated on the benefits the interventions | 9 | 11 | 5 | 36 |
| 31. Research has been designed to ensure inclusiveness of resource-poor smallholder farmers, especially women and youth | 19 | 5 | 1 | 76 |

Open-ended Questions

- What are main differences in the Livestock and Fish CRP country level work compared to previous CGIAR support to national research and development programs?
 - More partner involvement
 - It has been all involving
 - There good site engagement
 - Direct and participatory involvement of the target users of in research process
 - Closer relationships between research and development; involvement of more value chain actors
 - Spreading more resources among several partners; dealing with developmental partners; limited direct research work
 - Putting emphasis on the pig industry, which had been very much neglected before
 - Customized to the local need whereas before this was not done
- What is new or different about the animal science innovations now receiving priority attention?
 - Multi-stakeholder participation
 - Intentional interdisciplinary/multidisciplinary composition of research and involvement of key actors and stakeholders in the definition of research priority
 - Institutional strengthening; innovation platforms and marketing hubs are new interventions
 - The idea of hubs if managed better might be a new innovation
 - Attempting to do research and value addition throughout the whole value chain
 - New innovations that had not been given attention; for example, pig feed using sweet potatoes silage and housing
 - Feed is given more attention which is the main challenge to the sector
 - Breeding as a business model for poor households looking at the market demand and working at different intervention level
 - Integration fish com agriculture techniques
- What are the LF CRP areas of comparative advantage relative to other research and knowledge suppliers?
 - Research on feeds and diseases
 - World wide experience and lessons
 - Not significantly different

- Alternative pig feeds to reduce feeding costs and to increase availability of these feeds
 - Research was farmer based and it surely involved the grass-root farmers and other stakeholders along the value chains
 - Partnership with higher learning institution and timely financial availability for execution of the tasks
 - Diverse work experience in different countries and multidisciplinary team work which they bring to bear on the Program R&D
 - Easy to influence policy because it is working direct with policy makers; empowering smallholder farmers through formation of farmer groups and innovation platforms
 - Have abundant resources on livestock; favorable working environment
4. In cases where VCD progress has met or exceeded expectations, what have been important success factors?
- Bringing partners on board
 - Producer organizations and market led solutions
 - Consulting the smallholder farmers to contribute towards the priority areas of research
 - Hard work of the different stakeholders including extension staff and the researchers
 - More efforts are required to take on board the VC actors, support services and environment inclusive
 - Integration with research centers, selection of first movers; continuous follow up.

Value Chain Expert and SPAC Survey

1. In what ways does the program's value chain approach build on or fail to build on lessons learned from previous value chains research and development?
 - The conceptual framework and the issues being dealt with build upon what has already been done, among others, by ILRI, FAO, and IFAD; the experiences of ILRI and FAO have been very useful to shape up the technical and spatial scopes of the study
 - The main lesson is that in this collaborative approach, inter relationships are all important in making the process work; not sure that it is really happening yet
 - The value chain approach has taken a more holistic approach; it is an advanced step from earlier value chain which only focused on commodity chain
 - It appears to build on previous work but not at a high level; instead it looks to identify VC problems and address them with some research solutions; given that the project is in early days it is still difficult to judge
 - Good literature review of past experience of livestock value chain development was done for the program preparation
 - Little attention paid to business take-up, business models, market linkage; these are included in theory, but have not yet been much seen in practice
2. What are your views on the combination of countries and animal sub-sectors selected for the value chains research and development work of the program?
 - The livestock subsectors or enterprises selected in each of the study countries are in fact crucial to livelihoods of millions of people in the respective countries; the way countries were chosen however seems that political correctness was more important than sound statistical analysis
 - They are all valid, but others may have been equally valid
 - The combination of countries seems quite appropriate as do the animal VC chosen
 - Understand the need for focus, but the strict combination of commodity-country is preventing other potential partnerships for livestock and fish value chain development to be fostered because they don't fit into L&F country-commodity couples

3. What are the CGIAR partners' (ILRI, ICARDA, CIAT, WorldFish) areas of comparative advantage for value chains work relative to other research and development organizations?
 - Centers involved in the study have very experienced applied economists and biological scientists who could work on all aspects of the selected value chains in a more comprehensive framework than any other individual or set of institutions in the region
 - They have the appropriate background and experience for the subject area; not sure that they all have comparative advantages in value chains work specifically; some may but not all
 - These organizations have been working on different aspects of livestock and fish; they have advantage over other organizations given the multidisciplinary work and long experience
 - Main comparative advantage is the ability (they hope) to apply solid animal research to VC issues to provide eventual solutions; their experience in VC work is limited so time will tell if they can determine the issues and use research to apply solutions that are useful
 - Conceptualization of analysis tools relevant to livestock and fish value chains; expertise to address research problems and help solve bottlenecks arising throughout those value chains
4. What is new or different about the animal feed, health and genetics innovations now receiving priority attention?
 - Components of the value chain are being considered as components of the whole value chain unlike earlier efforts that treated them in isolation; adoption or consumption of a given technology in this particular context is not only about the technology, it is also about how you generate that technology.
 - VCs have not driven the thinking too much in the three technical flagships
 - Fact that these are now viewed from the point of marketability of the animals increases the chances of success
 - In all areas of research they are applying state of the art research to develop innovations; animal health - new and more useful vaccines; genetics - genomic selection and gene identification; feeds - development of better fodder and ways to store and manage feed production; in all the research seems appropriate; the larger question might be can it be delivered effectively.
 - Relatively little; the objective is clearly for research to be informed by value chain needs, but this focused research is not yet happening; it's also unclear as to whether value chain priorities for research have yet been identified
5. What disciplinary competencies are most important for supporting livestock and fish value chains research and development?
 - Livestock marketing, livestock production, and animal health
 - Interpersonal skills and the ability to listen understand others' points of view; need for flexibility
 - Market economics with understanding of wider economic development and service delivery systems; and the supporting technological disciplines –feed, health, etc.
 - Certainly several; VC research and development competencies and gender and sociology competencies are required
 - Marketing, feeds and animal health
6. Does it appear from the program documents that clear and appropriate roles have been defined for the program's research and development partners?
 - Yes
 - The roles are clear enough; it is the interfaces that are not always clear.
 - Yes
 - Generally yes but they are written with broad strokes; new research partners are just getting going; further into the program this should be clearer

7. Are other value chain experts and organizations likely to use the VC “toolkit” of methods being developed by the program?
 - Of course
 - Not sure how other VC's and organizations are faring when trying to do something similar
 - This will depend on the success of the program but if successful this could lead the whole CGIAR value chain work
 - If successful and disseminated widely, then yes
 - Yes; this is happening according to the feedback being received on the toolkit
 - Unclear; these methods still need to be developed and piloted before we will know the likelihood of their take-up

8. What needs to be done in value chains research and development programs to support scaling to new areas and new countries?
 - The approaches being followed, the tools being used and the lessons being learnt need to be documented in detail with due consideration of the external validity of whatever is being done in the project countries
 - Honest evaluation of strengths and weaknesses together with the bravery to say 'we may have got this wrong'
 - Most important is to show what market improvements work and under what conditions and then these successful experiences have to be popularized with different media
 - The lessons learned both within VC and among different ones will need to be analyzed such that lessons learned can be scaled up
 - Spread the news about the methods and how they address specific value chain problems in formats that are more likely to be read by development practitioners and local stakeholders than scientific peer-reviewed articles; thus concentrate on writing peer-reviewed science but break the news by providing other types of material that convey the same information to development partners that could re-use it; use one or two-page research briefs, blog posts, informative posters in addition to the peer-reviewed articles
 - Respond to clearly identified needs; work with business and lead firms to support scaling up with market incentives; understand the sociology of the producers to understand how they will be encouraged to adopt new practices

9. What might be ways to support cross-site and cross-value chain learning?
 - Flexible arrangements need to be made to create forums for sharing experiences among the different actors
 - Face to face open discussion about each other's issues and needs
 - CGIAR wide value chain workshops would be useful fora to do cross-site and program communication, and it is needed
 - Better discussion among all the flagships and all the on the ground teams will be required; facilitating such discussion may be tough
 - Ensure that participating professionals are aware of developments from other locations

10. In VCD programs that have met or exceeded expectations, what have been important success factors?
 - Investing on the capacity on the national partners and having an interdisciplinary research team.
 - The starting points may have been less of a force fit
 - Buy-in from development agencies and national programs to embrace and adopt the VCD interventions proven to be successful is key success factor
 - Incorporation of private sector partners who are willing to invest into developing farmers' capacities so that they can benefit by getting better quality and regular supplies
 - Market linkage and market-based incentives, business rationale throughout, effective communications, effective demonstrations and championship

Annex L: Explanation of Changes

This annex points out changes that were made at two stages: from the evaluation terms of reference to the evaluation framework as presented in the Inception Report, and changes made during implementation of the evaluation.

Changes from Evaluation Terms of Reference⁵⁰

The evaluation terms of reference identified 17 questions, eight identified as being of “critical interest” and the other nine as being of interest. The first step in development of the evaluation framework was to cluster questions in order to better focus the evaluation on a manageable number of issues without eliminating questions of interest to the clients. The next step was to distinguish questions that pertained to program design from those that primarily or exclusively related to issues at the R4D site level. This was needed for design of the evaluation methodology.

Following the above steps, the framework was reviewed to see if there were important gaps. One clear gap identified was insufficient attention in the terms of reference questions to progress in generating outputs, prospects for scaling, and expectations for achieving the program’s intermediate development objectives. There also appeared to be a need for questions related to the stated rationale for the value chain approach of the program, particularly considering the significance attached to the innovative value chains approach in the program proposal. Additional questions were added in order to address these perceived gaps.

The emerging framework was then assessed relative to the CGIAR guidelines and IEA standards for external evaluations. This step pointed to additional management, quality of science and performance issues. At this stage, the updated questions were classified in terms of their relationship to the standard CGIAR evaluation criteria: relevance, effectiveness, efficiency, impact, sustainability and science quality.

The modified evaluation framework focused on three major areas of investigation:

- Program design and management
- R4D site implementation
- Outputs to outcomes

Under these categories of issues, there were 15 sub-set issues and more than 60 questions. This was too many questions to address and so a single question was posed for each of the 15 issues. Other specific questions were retained, with appropriate rewording, as indicators. The resulting framework was used as the basis for the desk review.

During the desk review, the framework was further focused as it became clear that the evaluation could say relatively little on some issues due to the early stage of program implementation. Moreover, some questions risked going too far into general program strategy and management issues. The final version of the framework focuses on the above three major areas of investigation and ten critical questions. During the above process, none of the questions put forward in the original terms of reference were dropped entirely; rather, they were consolidated under a reduced number of overarching questions.

There were no changes between the evaluation terms of reference and the implementation approach identified in the Inception Report with the minor exception that the start-up time in Nairobi was increased to allow time to meeting with leaders and scientists of the thematic flagships. It also transpired that it was not

⁵⁰ The changes reported below were identified in the Inception Report. They were accepted as the revised based for implementation of the evaluation. CGIAR evaluation guideline indicate that these change should be identified again in the Evaluation Report

possible to convene a meeting of the Evaluation Reference Group and so the ERG members were asked to send comments on the draft Inception Report rather than hold a workshop to present and discuss the report.

Changes from Inception Report

Changes during Implementation

As mentioned above, the start-up visit in Nairobi was increased to a full week in order to allow time for meetings with the leaders and scientists for all of the thematic groups. Also as mentioned, an additional stop-over was added in Nairobi in order to meet with the Science and Partnerships Advisory Committee.

The country visits included the main component activities of the standard schedule but the timing and balances were different. For example, two and one-half days were spent on site visits in Ethiopia and there was no start-up staff meeting. In the other sites, the field visits were one to one and one-half days and all had start-up staff meetings. In Uganda, there were relatively more interviews with partners and stakeholders, and were relatively less in Egypt. In Tanzania, there were three meetings with staff and key partners rather than two. The specific agendas of the staff meetings and the wrap-up workshops were adjusted, as had been expected, in order to better focus on issues arising and facilitate the participatory development of findings and recommendations. The sequence of activities and topics covered in each site visit are summarized in Annex E, which presents abridged versions of the field note for each site visit.

The surveys identified in the Inception Report had two changes. One was to include partners in the survey for stakeholders rather than the survey for program staff. This change was made after it was found that the value chain teams do not make a clear and consistent distinction between “partners” and “stakeholders”. The second was to add eight open-ended questions to the staff survey and four open-ended questions to the partners and stakeholders survey. These changes were made to give the staff, partners and stakeholders increased opportunity to comment on key issues and propose their solutions to factors possibly limiting the effectiveness of the program’s value chains approach. The only other change in the surveys, as mentioned above, was that the deadline was extended in an effort to get higher response rates.

The Inception Report made reference to use of an “Additional Information Checklist” and to review of contracts, MoUs, and financial and budget data. These were not central to the evaluation framework and methodology but were viewed as having the potential to add complementary information and insight. As it turned out, time was constrained during the field visits to implement the schedule of essential activities, i.e. the group meetings, informant interviews, site visits, and wrap-up workshops. There was no time to seek out additional information or review MoUs and financial data. Having done so would not have had any discernable impact on the evaluation findings or recommendations.

Changes in Analysis of Results

The planned analysis for the staff and stakeholder surveys was to have included cross-tabulation. For the staff survey, this was to be done in order to identify differences across sites, gender, theme affiliation, and institute. For the stakeholder survey, this was planned to identify differences among stakeholder categories and across locations. The possibility of doing useful cross-tabulation analysis was greatly reduced by lower than hoped for response rates for both surveys. The patterns of responses also reduced the possible value of cross-tabulation. For many questions, there were large percentages agreeing and for others there were large percentages that were neutral or did not have enough information. Relatively few questions had a sufficient distribution of replies ranging from strongly agree to strongly disagree to even make it worthwhile to break out responses by respondent categories. Even in those cases, there were too few replies to draw firm conclusions after discounting for the large numbers that indicated they were neutral or did not have enough

information. While some cross-tabulations were run to help with interpretation, the results were not useable as a formal part of the analysis.

Similarly, very few sites provided the written inputs – case stories or the SWOT analyses. In follow up messages, the VCCs for the sites that did not send requested inputs confirmed that their sites were not far enough along to have case stories on innovations and value chain business models. The cases for the site that did send information were, for the most part, at the stage of demonstrations and piloting – not proven innovations. The value chain business models were short descriptions of the target sector, not specific business relations for specific value chains. Consequently, it was not possible to do a systematic comparison of the requested written materials in order to identify success stories and lessons learned. The only analysis possible was to develop lists as to what is being worked on where, which was used when preparing findings on the follow up research agendas.

Changes when Preparing Findings and Conclusions

During the evaluation, it was found that three specific indicators were redundant or related too strongly to program-level issues rather than evaluation of the program's value chains approach. Consequently, the following specific indicators were not covered in the presentation of findings:

- Level of coordination among centers and related transactions costs – program level issues
- Appropriate evidence being collected on benefits of the innovations – too much overlap with findings on innovation assessment methods under the question on the Research Agenda
- Research ensures inclusiveness of resource-poor smallholder farmers under the last question on development outcomes – duplicates findings on same issue covered under the question on Innovations

As a result of the comments received on the first draft of the report, the evaluation matrix was updated and two evaluation questions were added. The changes in the evaluation matrix are shown in Annex B.

Changes during Final Revision

In comments on the first draft of the evaluation report, there was a recommendation to separate program design and program management issues. This was done and corresponding indicators were slightly adjusted. Otherwise, there was no substantive change in the evaluation questions at the time of final revision. To assist readers, the ordering of indicators under the evaluation questions was adjusted to correspond to the coverage of topics in the findings section of the report.

Annex M: R4D Site Outcomes and Interventions Driving Impact Pathways

Egypt⁵¹

1. Dissemination of Abbassa improved strain
 - Improved strain distributed to multiplication centers; monitoring and support of BMPs
 - Improved strain sold to commercial hatcheries
 - Continued development of improved strain; on-farm and on-station testing
2. BMP training
 - BMP guidelines and training courses developed
 - BMP trainers trained and deliver training
 - Continued development of BMPs
3. Support for women retailers
 - Situational analysis of retailers and CDAs
 - Form retailer committees, provide support and training
 - Capacity development of CDAs
4. Pro-poor aquaculture production
 - Identify and test technologies and development guidelines for pilot sites
 - Develop technology specific BMPs
 - Design scalable interventions integrating GTAs
5. Upper Egypt aquaculture production
 - Identify potential sites and constraints
 - Identify and test technologies and development guidelines for pilot sites
 - Develop technology specific BMPs
 - Develop local producer organizations
 - Build capacity of hatcheries and local input supply chain
6. Organizational and policy development
 - Organization and policy analysis of sector to identify relevant actions
 - Support development of industry organizations
 - Support work on key projects by industry organizations
 - Create platform for policy dialogue
 - Advocate for policy changes, promotion of aquaculture sector

Assumptions:

- large numbers of farmers are willing to stock the Abbassa strain
- farmers will stock the improved strain in addition to the existing commercial strains (but not in the same pond) to allow for comparisons to be measured
- continued funding support for genetic research
- faster growing fish will result in more fish being traded and sold by other actors in the VC
- will be possible to deliver training by private sector actors, such as feed companies after the project has finished BMP training should result in rapid production increases (more rapid than dissemination of the improved strain) that will result in progress on 'poverty reduction' goals
- Interests of the CDAs coincide with those of the project and the retailers
- Improved working conditions, lead to improved entitlement to control assets
- Appropriate (catfish tank) technologies can be developed that are sufficiently attractive to be implemented by women

⁵¹ Primarily based on project results; identifies activities to achieve results

Ethiopia⁵²

1. Increasing the capacity of value chain actors
 - farmer-hub models
 - farmers group formation
 - multi-stakeholder organizations
 - farmer groups access to credit
 - Agricultural and Market Information systems
 - models for delivering information and training
 - Embedding extension delivery in business planning modules
 - Strategies for linking universities and research institutions to private, public and non-governmental extension systems
2. Models for developing the value chains markets and institutions
 - Innovative and efficient input delivery enterprises
 - Evidence generated on market integration and price volatility
 - Methodology to develop innovative institutional arrangements
 - Innovative institutional arrangements that increase market participation
3. Strategies for improving small ruminants' animal health
 - Innovative models for delivering veterinary inputs and services
 - Innovative strategies for building the capacity of public and private Community Animal Health Workers
 - Research on vaccines for major diseases
 - Evidence of the Epidemiology and diagnosis of major diseases using recognized epidemiology approaches
 - Efficient and sustainable strategies to support the regulation and monitoring of veterinary inputs and service delivery
4. Strategies for boosting small ruminants' production and supply
 - Tested animal husbandry practices including feed development and feeding practices
 - Appropriate and localized breeding programs

Assumptions

- Addressing whole value chains will improve uptake of innovations
- Work on localized solution will generate regional and global public goods
- Significant numbers of poor smallholders can become market oriented through intensifying of small ruminant production
- Pro-poor development of small ruminant value chains can generate sufficient incentives to promote investment
- The poor will consume more meat and mutton if availability of these products improves
- The program will generate significant interest stimulate investment and buy-in of partners
- Identifying and working with the right partners will ensure impact at scale
- The program will generate convincing evidence to influence positive policy towards the sector
- Small ruminant value chain actors are keen to try the innovative institutional arrangements we are to develop for marketing.
- Human and financial resources would be available to implement the interventions.
- The policy environment favors the establishment and strengthening of local level farmers' associations.

⁵² Identified program outcomes and outputs but not interventions; although some outputs are actually interventions

Tanzania⁵³

Specifies interventions and program outputs

1. Institutional innovations for reliable and consistent access to inputs and services

Interventions

- Farmer group formation
- Facilitate contract negotiation
- Partnerships to strengthen extension, access to inputs, marketing services
- Develop capacity of trader associations
- Facilitate creation of village banks and other credit institutions

Outputs

- Innovative contractual arrangements
 - Innovative dairy marketing hum models
 - Feasible collective action models for access to inputs and services
 - Innovative arrangements for accessing financial services
2. Innovative strategies for consistent and reliable access to Artificial Insemination (AI) materials and services, forage, and water

Interventions

- Support development and implementation of dairy development master plan
- Partnership to strengthen extension delivery, access to inputs, marketing services

Outputs

- Innovative AI delivery strategies
 - Innovative water harvesting plans
 - Innovative forage supply strategies
 - Better land use plans
3. Generation of evidence for achieving impact at scale and influencing policy

Interventions

- Develop capacity of trader associations
- Provide evidence for scaling; co-create technologies
- Rational [pig] marketing strategies
- Build capacity of actors in advocacy and lobbying; link farmers to apex bodies

Outputs

- Rational [pig] marketing options
 - Evidence of tested best dairy practices
 - Strategies of engaging policy and regulatory bodies
4. Innovative strategies for increasing the consumption of dairy products

Interventions

- Link farmer groups with apex bodies
- Facilitate farmer's organizations around marketing, inputs, services
- Milk campaign strategies tested and implemented
- Research to understand drivers of milk consumption

Outputs

- More localized and incentive based regulator standards
- Feasible collective action models
- Efficient milk marketing strategies

⁵³ Does not make explicit assumptions

Uganda

1. Innovative models for increasing farmers' access to quality and reliable inputs and services for improved pig productivity

Interventions

- Improved biosecurity measures along value chain
- Rapid diagnostic tests for priority diseases
- Design different models for delivery of information, products, services
- Improve regulatory bodies' capacity
- Improve breeding management practices
- Develop capacity to increase number of extension workers with pig information
- Increase farmers' access to business development services
- Facilitate farmer group formation
- Finance institutions develop appropriate credit packages
- Feed processors and farmers generate feed rations

Outputs

- Integrated strategy for pig health and biosecurity
- Genetic selection plan and national breeding strategies
- Feed rations formulated from local materials
- Strategy for building capacity of extension
- Innovative models of pig business hubs
- Appropriate credit and financial products

2. Strategies for improving supply and access to quality and safe pork products

Interventions

- Partnership to prove information on best practices
- Improve capacity of actors to adhere to and implement regulations
- Provide better packing information to feed processors
- Generate and provide consumers with nutritional and taste related information
- Generate and disseminate information about pig production and the pig sector
- Improve capacity of piggery farmers institutions to lobby

Outputs

- Integrated strategy for pig health, zoonosis and biosecurity
- Strategy for communicating information on the role of the pig industry
- Strategy for strengthening piggery farmers' institutions

3. Innovations for improving farm management and disposal of pig waste

Interventions

- Improve capacities of veterinarians
- Provide actors with information about pig waste management
- Increase regulatory bodies' capacities to implement regulations
- Generated and disseminate information about pig waste management
- Promote use of pig waste for biogas

Output

- Strategy for regulating pig waste management and disposal

Assumptions

- Partners are interested and have the resources to scale out innovations.
 - Good communication strategies are in place.
 - The value chain approach will deliver results to the Uganda pig value chain actors.
 - There is sufficient demand for pig and pig products in Uganda.
 - Smallholder pig production systems are sustainable.

- The pig sector will become a priority in the national agricultural policy framework.
- Different stakeholders are willing to be part of the partnership.
- Climate and physical environment and factors of production are supportive for pig production, especially access to water during hot periods of the year.
- Better organized markets are attractive to traders and middlemen.

Vietnam⁵⁴

1. Strategies for increasing farmers' sustainable access to quality and affordable feeds and feeding practices
 - Wide range of options for balance rations based mainly on locally product feed, crop residues and agro-industrial by-products
 - Models to increase feed companies' access to capital
 - Models to increase farmers access to feeds knowledge and innovation
 - Models for delivering quality and safe feeds
2. Innovative mechanisms for increasing farmers access to affordable and quality genetic materials and breeds
 - Strategies for scaling knowledge of value of genetic resources
 - Appropriate breeding programs and tools for low input systems
 - Research on breed competitiveness models for improving experience in selecting breeds
 - Models for increased quality breeding through farmer associations
 - Strategies for increasing access to knowledge about better breeding practices
3. Improving pig productivity through enhanced animal health and better management of zoonotic diseases
 - Approaches for farmers' increased access to productivity enhancing technologies
 - Models for enhancing farmers and consumers knowledge about disease
 - Models for controlling and management pig diseases and zoonosis
 - Approaches for supporting enforcement of biosecurity regulations
 - Models for improved enforcement of certificates of origin
4. Innovative mechanisms for managing pig waste and pollution resulting from increased pig production
 - Approaches for promoting use of biogas waste for fertilizers
 - Approaches for promoting use of biogas tanks
 - Models for increasing farmers' access to waste management knowledge
 - Improved zoning models
5. Enhanced supply of safe and quality pig products
 - Strategies for policy advocacy to inform policy debate
 - Engender an enabling environment for pro-poor pork value chains
 - Studies on pig market dynamics
 - Models for enhancing linkages between companies and production zones
 - Models of farmers organizing in networks for vet services, linked to processors
 - Approaches for improving access to market information
 - Approaches for supporting implementation of quality regulations and laws
 - Models for improving consumer's perceptions about processed pig products
6. Appropriate institutions and policy strategies to improve value chain performance
 - National pig sector review analysis
 - Innovative approaches for improving farmers' access to vet services
 - Models for increased farmers' access to market information
 - Innovative approaches for linking farmer's organizations with processing companies

⁵⁴ Only program outputs, not interventions, identified; does not make explicit assumptions

- Strategies for facilitating establishing of learning alliances
- Better designed contracts between farmers and other stakeholders

Nicaragua

1. Strategies to increase production and consumption of quality beef and dairy products

Interventions

- Build capacity of regulatory bodies to enforce milk and beef quality control policy
- Develop low cost traceability systems
- Promote use of quality based payment systems for milk
- Link farmers to quality schemes and animal health services
- Provide technical assistance for establishment of milk collection points

Outputs

- Innovative approaches to influencing enforcement of quality control policies
- Low cost traceability systems
- Strategy for the development of milk and beef quality schemes and accessing technical services
- Innovative strategies for developing sustainable milk and beef collection points

2. Sustainable access to pasture, forages, seed and genetic materials

Interventions

- Identify and promote improved pasture and forages
- Train technicians and producers on feed rations using local materials
- Facilitate farmer led seed systems among producers
- Research to identify trait preferences and breeding objectives of farmers
- Enhance capacity of local actors to implement breeding programs

Outputs

- Innovative forage production and supply strategies
- Innovative breeding strategy for dual purpose cattle

3. Institutional arrangements for increased value chain coordination and performance

Interventions

- Facilitate formation of strategic alliances – traders, farmers, processors
- Facilitate farmers' group formation about bundled services
- Build partnership to strengthen extension delivery, access to inputs and marketing services
- Develop capacity of traders associations
- Facilitate creation of credit access institutions
- Improve capacity of stakeholder institutions to lobby and advocate

Outputs

- Innovative contractual arrangements
- Innovative dairy and beef marketing models
- Feasible collective action arrangements for farmer access to inputs and services
- Innovative arrangement for accessing financial services
- Strategies for increasing the capacity of stakeholder institutions to lobby

4. Promotion of eco-friendly beef and dairy production practices

- Provide NGOs, private operator and producers with information on dairy and beef value addition
- Provide NGOS with information about use of cattle waste for biogas
- Promote better management of farms
- Enhance co-learning opportunities
- Outputs
- Innovative strategies for adoption of technologies and good farm management
- Innovative strategies to promote market incentive mechanisms for natural resources management

Assumptions (identified as opportunities, not just assumptions)

- Dairy products are important dietary components for consumers from all social strata
- Increasing per capita income and low per capita milk consumption levels in Nicaragua present great potential to increase consumption of higher quality processed dairy products.
- Improving overall performance of the value chain provides a unique opportunity to improve income generation across the value chain, while enhancing product quality for consumers.
- Increased focus on exporter certification and enforcement by regional importers (for instance El Salvador and Mexico) offers a good incentive to farmers and processors to improve and uphold quality standards.
- The regional market of the Caribbean Basin countries constituting an estimated population of about 150 million consumers is a key driver of the dual purpose cattle value chain development.
- High-quality raw milk is the basic input for a large variety of higher value dairy products that can be profitably produced with local identity (for instance cheese).
- Improved and well-managed pasture and silvo-pastoral systems are attractive economic and environmental alternatives, especially due to their Carbon accumulation potential and capacity to recover degraded areas.
- Payment for ecosystem/environmental services (PES) offer good potential of compensation and rewards from different final users at local, national and global levels.
- The private sector is increasingly aware of the potential of measures such as carbon credit purchases and direct interventions in their supply chains.
- Capital and knowledge aimed at small producers and industry enterprises to increase competitiveness and to improve productivity and added value will be available.
- Compensation schemes based on carbon credits and other ecosystem services have the potential to improve farmer livelihoods.

Annex N: Performance Scores for Evaluation Indicators

| Evaluation Indicators | Score ⁵⁵ |
|---|---------------------|
| Conceptual framework is consistent with GCARD Road Map for transforming AR4D systems | 5 |
| The conceptual framework is appropriate for identifying and assessing research priorities | 3 |
| The conceptual framework is appropriate for assessing progress in developing appropriate value chain interventions | 3 |
| The theory of change and impact pathways are clearly articulated | 4 |
| Evidence has been generated to support/validate the program's theory of change | 2 |
| Assumptions underlying impact pathways and the theory of change are valid | 3 |
| Strategy for selecting value chains is consistent with the need to generate global public goods | 4 |
| An appropriate research agenda has been articulated for validating the methodology for selecting target value chains | 1 |
| Scope and quality of planning and review processes being used | 5 |
| Balance being achieved in terms of consistent, harmonized application of the approach across value chains versus adapting application to the specific value chain context | 4 |
| Technical support provided to R4D sites | 4 |
| Adequacy of information exchange and cross-site learning | 2 |
| Level of collaboration and coordination with other CRPs | 4 |
| Human resources available in the quantity and time planned | 2 |
| Financial resources available in the quantity and time planned | 2 |
| The selected value chains have been adequately characterized and appraised with supporting information and data | 5 |
| Methods for assessing research priorities and evaluating best-bet innovations are being implemented appropriately | 4 |
| Appropriate attention been given to views and needs of the value chain actors in defining the research agendas | 5 |
| An appropriate animal science research agenda | 3 |
| Relevance of research agenda for pro-poor value chain upgrading | 5 |
| An appropriate research agenda has been defined for the social sciences of value chain development | 2 |
| Sufficient attention to post-production value chain technologies | 1 |
| Appropriate methods for assessing prospective innovations | 2 |
| Research agendas reflect attention to areas of comparative advantage relative to other research suppliers | 4 |
| Changes in the scope of issues being addressed in thematic research | 1 |
| The value chain agenda effectively informs and draws from the program's technology platforms | 3 |
| Level of collaboration and coordination between managers of VCD and thematic components | 2 |
| Use of system-based frameworks in assessments and technology development | 3 |
| Benefits from developing the research agenda within a multidisciplinary, systems-based framework | 4 |
| Transactions costs for developing the research agenda within a multidisciplinary, systems-based framework | 3 |
| Disciplinary composition of the country teams has been evolving appropriately to support the integrated approach | 3 |
| Appropriate partnerships with development organizations | 5 |

⁵⁵ Each criterion was scored: 5 = exceeded expectations; 4 = somewhat exceeded expectations; 3 = met expectations; 2 = somewhat below expectations; 1 = below expectations

| | |
|---|---|
| Performance of different program partners | 4 |
| Clearly articulated engagement process with partners and stakeholders within the selected value chains | 4 |
| Appropriate and sufficient range of partnerships | 2 |
| Roles have been clearly defined for research and development partnerships | 3 |
| Communication strategy has been developed and is being implemented for partnership and stakeholder engagement | 1 |
| Pro-poor and gender responsive technological and institutional innovations identified | 4 |
| Program has identified policies and strategies for improving access to essential services | 2 |
| Progress compared to plans and expected research impact pathways | 3 |
| Funding mobilized for large scale R4D interventions | 1 |
| Level and focus of investment across the value chains | 2 |
| Level of and strategies for capacity development | 4 |
| Improved coordination along the value chains | 1 |
| Interventions identified can go to scale within the timeframe of the program | 2 |
| Appropriate evidence on the benefits the interventions | 1 |
| Range of issues necessary to ensure uptake of the interventions identified | 2 |
| Realistic strategies and mechanisms for scaling-up and scaling-out have been identified | 2 |
| Appropriate balance in the attention given to the IDOs | 2 |
| Data being collected to allow assessment of impacts | 1 |

Annex O: Organization and Timing of Evaluation Activities

Evaluation Roles and Responsibilities

The evaluation team comprised the lead evaluator and two support evaluators.

The lead evaluator was Doyle Baker, an agricultural economist with more than 30 years of experience directly related to research-for-development and agricultural value chains development. Spanning the 1980s and 1990s, he conducted and led farming systems and resource management research in Africa, including nine years for the International Institute of Tropical Agriculture (IITA). Starting in the late 1990s and until 2012, he was a technical manager in FAO with global leadership responsibilities for farming systems, farm management, agricultural marketing and value chains, and agribusiness and agro-industries development. During the mid-2000s, he launched and led the Value Chains Working Group of the Donor Committee for Enterprise Development.

Andrew Speedy was the support evaluator for the livestock sector value chains. He is an animal scientist, with more than 30 years professional experience as a Lecturer (University of Oxford), Senior Officer (Feed and Animal Nutrition) and Country Representative (Vietnam) in FAO, and independent special advisor and consultant. As Senior Officer and Country Representative for FAO, he was directly involved in developing, implementing and evaluating a wide range of agriculture and livestock sector field projects, including several projects with value chain development activities.

John Hambrey was a support evaluator for the aquaculture value chains. He is a resource economist with complementary training in applied biology. For more than 30 years, he has been a consultant and technical advisor specialized in sustainable aquaculture and fisheries development and management. He has worked throughout Europe, Asia, the Pacific and Africa for a variety of national and international agencies, development banks and non-governmental organizations.

The main roles and responsibilities of the evaluators are summarized in the following table.

| | |
|--------------------|---|
| Baker | Evaluation framework and methodology; preparation of Inception Report and Evaluation Report; VCD coordination and oversight; partnership and stakeholder engagement; VC methodological toolkit; realism of impact pathways and assumptions; cross-site coordination and technical support; VC social sciences research; appropriateness of institutional innovations; policy and investment support |
| Speedy and Hambrey | For their sectors: value chain development strategies, appropriateness of technological innovations and research methods; scalability of innovations; synergies between technical thematic research and VCD work; potential for pro-poor value chain development and transformation |

Roles and responsibilities for evaluation management and governance were defined in the evaluation terms of reference and were not changed. See Annex A for an overview of the responsibilities for the Evaluation Manager, Evaluation Commissioning Body and Evaluation Reference Group. The ERG – which includes representatives from the four partner centers as well as IFAD and Care International - was the main mechanism for organized stakeholder involvement in the design and oversight of the evaluation. The ERG did not, however, play an active role at the stage of the Inception Report as mentioned above.

As indicated in Annex A, the Program Planning and Management Committee, Science and Partnership Advisory Committee and ILRI Institutional Management Committee all have specific responsibilities with respect to the evaluation as well.

Timeline

The CCE was originally scheduled for early 2014. Due to challenges in making necessary arrangements, the start of the evaluation was delayed until July, with field visits scheduled to take place in August through early September. The adjusted timeline for the evaluation as indicated in the Inception Report is shown in the table below.

| | |
|--|--------------|
| Inception Phase | |
| Documents sent to evaluation leader | 7/07 |
| Documents review and preparation of Inception Report | 7/07 to 8/03 |
| Submission of Inception Report | 8/04 |
| Review of Inception Report by ERG, SPAC | 8/05 to 8/10 |
| Response from CRP to Inception Report | 8/11 |
| Finalize Inception Report | 8/15 |
| Fieldwork Phase | |
| ILRI Nairobi – CRP review; key informant interviews | 8/11 to 8/15 |
| Ethiopia R4D site visit | 8/16 to 8/23 |
| Uganda R4D site visit | 8/24 to 8/30 |
| Tanzania R4D site visit | 8/31 to 9/6 |
| Egypt R4D site visit | 9/7 to 9/12 |
| ILRI Nairobi – debriefing and wrap up | 9/13 to 9/16 |
| Follow-Up Phase | |
| Draft Evaluation Report is submitted | 9/30 |
| Finalized Evaluation Report is Submitted | 10/31 |
| Draft Action Matrix, as called for in IEA guidelines, is submitted | 11/07 |
| Action Matrix is finalized. | 11/21 |

The fieldwork phase of the evaluation was completed according to the revised schedule. In agreement with the program leader and evaluation manager, the schedule for the follow up phase was adjusted twice to accommodate extra time needed to prepare the draft evaluation report. In the end, the evaluation report was submitted one month after the target date shown above.

Deliverables and Dissemination of Findings

The evaluation deliverables and planned dissemination of findings are summarized in the following table.

| Deliverables | Dissemination |
|---|--|
| Inception Report prepared in line with IEA guidelines, including clear evaluation framework and methodology | CRP management, ECB, ERG, EM, staff and stakeholders via program wiki |
| Draft Evaluation Report prepared in line with IEA guidelines and including detailed recommendations | CRP management, ECB, ERG, EM, PPMC, SPAC, ILRI BoT, staff and stakeholders via program wiki |
| Finalized Evaluation Report | CRP management, ECB, ERG, EM, PPMC, SPAC, ILRI BoT, staff and stakeholders via program wiki, CGIAR IAE |
| Field notes for the visited sites and complete data for the surveys | CRP Management |

Annex P: Lessons Learned

Lessons on CCEE design and Implementation

The most important lessons learned for future CCEEs were as follows:

1. The participatory approach of the CCEE worked extremely well. The staff, partner and stakeholders at each country site participated actively in the facilitated discussions and wrap up workshop. It was particularly useful to share observations and thoughts along the way during the site visits. This helped the evaluation team to better understand issues and potential recommendations. It provided real time feedback to the value chain coordinators and teams. As was stated during concluding remarks at one of the wrap up workshops, the teams will have gotten at least 90 percent of the value of the evaluation by the time the team left. It seemed that the coordinators and teams appreciated the interactive and on-the-spot advisory approach of the evaluation.
2. The country site visits started immediately after the Inception Report was approved, which was one week after it had been submitted. This did not allow time for the proper scheduling of field visits, or for the evaluation team to do focused review of documents based on the approved evaluation matrix. If at all possible, there should a gap of around one month between review and acceptance of Inception Report and start of field visits. This would avoid problems encountered in detailed scheduling of field visits and delayed start in launching of survey.
3. With nine countries and multiple sites within country, it will become less and less tenable to go to four countries and 1-2 sites per country. It also is not necessary. It would be more cost effective to rely mostly on a combination of surveys, desk review and skype interviews or meetings.⁵⁶ These could be combined with a meeting or workshop with selected people in one location. This would have added value in bringing key people together – regaining the participatory approach of this CCEE.
4. It is important to identify a clear boundary between the scope of the CCEE and program level issues, and to make sure that program level issues are excluded or only included with a very specific scope of what is to be addressed. This was eventually worked out in this evaluation but it created confusion during the site visits and analysis of results.
5. It is important to ensure that adequate time included in work plan for analysis and write up, particularly when the CCEE addresses a complex issue cutting across much of the CRP. Related to this point, it would be useful to control the scope of future CCEEs by limiting the subject matter to be covered and/or limiting the number of indicators per evaluation question. The evaluation framework had only ten questions but it had a large number of indicators that were in effect sub-questions. All or nearly all of the indicators covered important aspects of the program's value chains approach, and so each required some attention. The end result was a more comprehensive evaluation but also one that could not be completed in the originally planned timeframe.

Some of the other lessons learned for future CCEEs were as follows:

1. One of the two support evaluators was recruited only at the time the Inception Report had to be submitted. Due to scheduling conflicts, the evaluation team was not able to meet together during or after the field visits. Neither was avoidable, but all efforts should be made for future CCEEs to recruit the evaluation team at or nearly at same time so the team can work together from start, certainly in time for all evaluators to contribute to the inception framework. It would also be much better to include in the schedule a joint working session at end of the field visits.
2. The surveys were a very good, cost-efficient approach for including widely dispersed staff, partners and stakeholders in the evaluation process, particularly when using an internet site such as SurveyMonkey. Response rates were lower than had been hoped for this evaluation but the advantages still clearly

⁵⁶ Although, if the resources are sufficiency, some field trips are absolutely essential to ground the analysis, have direct and working interactions with coordinators, and highlight the differences between theory and practice.

outweigh the disadvantages and solutions can be found to increase response rates. It also would be helpful to supplement the survey responses through follow up phone calls to key personnel.

3. During the field visits, there should be greater emphasis on bringing people together to meet evaluators rather than having evaluators spending hours in vehicles going to field visits and informant interviews. This was done for the wrap-up workshops and those were the most efficient mechanisms for information collection. If resources were to make it possible to hold more joint meeting with diverse informants and partners, this could greatly reduce time for visits in each country
4. There should be a mechanism for getting endorsement for adjustment to the evaluation framework and methodology during implementation. Some adjustments can and must be made but it was not clear in this evaluation whether adjustments should just be made and reported in the evaluation report, cleared with the evaluation manager or formally considered and approved by the ERG. It would be good to have a lightweight procedure for endorsement by the evaluation manager.
5. If at all possible, field visits should not be scheduled for peak holiday periods for many staff members and partners.
6. For revision of the inception and final reports, the parameters for required revisions should be clearly indicated by the representatives of the program commissioning the review.

Lessons on Program Level Issues

A number of program level issues were that were impacting on the value chain teams but were beyond the scope of this evaluation. Several of these issues were mentioned in the section on Findings. These included:

1. Restricted focus on nine countries and four species and whether there should be greater flexibility at some point to work in other countries and on other species
2. Challenges and instability stemming from insufficiency of funds and dependency on bilateral funding even for core activities
3. Time insufficiency due to small allocations across multiple assignments
4. Staff evaluation procedures and reporting lines of commands for scientists with multiple assignment or assignments to themes and sites led by scientists from partner centers
5. Realistic impact pathways with credible assumptions and balances in attention to the IDOs
6. Transactions costs for working in multidisciplinary mode and with partners
7. Weak linkages with regional organizations and initiatives

It would be helpful to the program scientists and the value chain teams if these issues could be addressed and resolved by the program managers and/or during the up-coming IEE.

Lessons on the CRP Model

There are two main lessons for the CGIAR consortium arising from this evaluation; one an issue of concern, the other quite positive.

The issue of concern was that many program scientists were struggling with the complexity of the CRP model, particularly the small time allocations to different programs and projects, insufficient funding from many sources, and confused reporting lines of command. Their struggles were aggravated by the changes in terminology and organization since the launching of the CRP model. Scientists will be more effective and more efficient if the consortium could stabilize, to the maximum extent possible, reorganizations and procedural changes during the early stages of introducing a new working model.

During the evaluation, it became clear that many scientists involved in Livestock and Fish had started to develop an appreciation of the value of R4D and the value chains approach in particular. To the extent that tipping points in organizational cultures are influenced by appreciative learning, this is potential good news for partner centers and for the CGIAR consortium. The next few years will be important in determining

whether this CRP and others working on their own variants of the value chains approach see the emergence of organizational cultures committed to “research for development”, including pragmatic problem-solving and client-driven research, partnering with developmental organizations, strong relations with national researchers and policy makers, and shared accountability for delivery of developmental outcomes. The challenge moving forward will be to find ways to build on momentum and enthusiasm without becoming overly concerned about limitations of specific approaches in specific CRPs.

Annex Q: Main Limitations of the Evaluation

The findings and conclusions of the evaluation might have been affected to a minor extent by seven limitations stemming from the evaluation implementation approach and timing.

1. The timing of the evaluation created problems at four of the five sites. In Nairobi and Ethiopia, several managers and scientists were on summer vacations and were not available to meet with the evaluators. In Tanzania, the government convened a last minute senior policy level, mandatory meeting to discuss policy solutions to pastoralist-farmer conflicts. Several key stakeholders could not as a result meet the evaluation team or participate in the wrap up workshop. In Egypt, Care had scheduled its own planning meeting at the same time as the evaluation visit and therefore Care senior officials could not meet with the evaluators or participate in the wrap up workshop. There is no reason to believe that any of the above introduced bias into the findings but all did impact on the completeness of information available to the evaluators.
2. There were pragmatic reasons for selection of countries visited. Nevertheless, the target sectors are relatively underdeveloped in the sites visited, particularly in the three East African countries. This influenced the extent to which the teams were working all along value chains and with pre- and post-production enterprises. The target sectors are relatively more developed in Nicaragua and Vietnam and perhaps even to Bangladesh in terms of post-production value addition the extent of commercial private sector investment. Based on program documents, the teams in those sites seem to be working relatively more with private sector companies and on post-production segments of the value chains. Site visits to those countries might have led to somewhat different findings on the scope of the program's value chains approach.
3. To differing degrees, all sites R4D sites are building on previous engagements of the centers in the target countries and integrated core and bilateral funding. Under these circumstances, it was not possible to assess unique, added-value contributions of the program's approach, particularly for the sites still relatively early in the transition to innovations assessment. Efforts were made to assess new contributions of program approach during field visits in three countries and two wrap up workshops. It was clear, however, that the dividing lines between pre-program and program, and between program and bilateral projects were not clear to partners or stakeholders.
4. The different pace and progress among the sites could have influenced appraisal of the effectiveness and efficiency of the value chain approach. The evaluation was mainly based on the earlier started and faster moving sites. These were also the sites where the methodological toolkit was being developed and adapted. There was learning by doing that helped the program refine and consolidate its approach but this also contributed to the time needed for assessments and slowed the transition to a focus on innovations assessment and value chain upgrading.
5. The evaluation methodology did not call for independent stakeholder scoping, identification and selection for the questionnaires, informant interviews and group meetings. The information from the partners and stakeholders on the program's stakeholder engagement processes could have a selection bias if the value chain coordinators set up meetings and provided names for only for stakeholders engaged from the start in program implementation activities. However, the meetings were set up with the categories of officials and private sector representatives specified by the evaluation team, and the partners and collaborators invited to meetings clearly included people who were relatively more and relatively less critical of the program's engagement processes. There is no reason to believe that the findings on stakeholder engagement processes were significantly affected.

6. The surveys were the main tool for getting information from staff at the sites not visited and from the program partners that did not directly meet with the evaluation team. The response rates to the surveys were only moderate, particularly for the partner and stakeholder survey. There could have resulted in some bias in the results if staff and stakeholders who were more critical of the program's value chains approach "self-selected" to not bother to reply. There is no way to determine whether such a bias was introduced or not but the interpretation of findings was based only on clear and obvious patterns. It is doubtful that even a substantially greater response rate would have impacted on the patterns reported in the findings. Moreover, the patterns of responses to both the open and closed ended questions made it clear that there was diversity in the viewpoints being expressed.
7. Due to the state of advancement at the R4D sites and the time available to the evaluators, it was not possible to generate independent, objective information to assess some of the indicators with any degree of reliability. This was the case for: evidence on benefits, level and focus of investment, funds mobilize for value chain upgrading and scaling, transactions costs of teams and partners, and the performance of performance of partners. The consequences are that the evaluation findings for these indicators are based on qualitative impressions of the staff, partners and evaluators. It is almost certainly the case, however, that more data would have confirmed these impressions - not have led to significantly different findings and conclusions.

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